



# **IMPLEMENTATION OF THE WATERFRONT SMALL AREA PLAN**

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**PLANNING COMMISSION HEARING**  
**Waterfront Landscape and Flood Mitigation Design**

**June 3, 2014**

**OLIN**





## PROJECT SCHEDULE

- WATERFRONT COMMISSION MEETING
- COMMUNITY MEETING
- WORKSESSION
- PUBLIC HEARING

**↑**  
ODBC  
DECISION







BEACHCOMBER

ODBC  
PARKING LOT

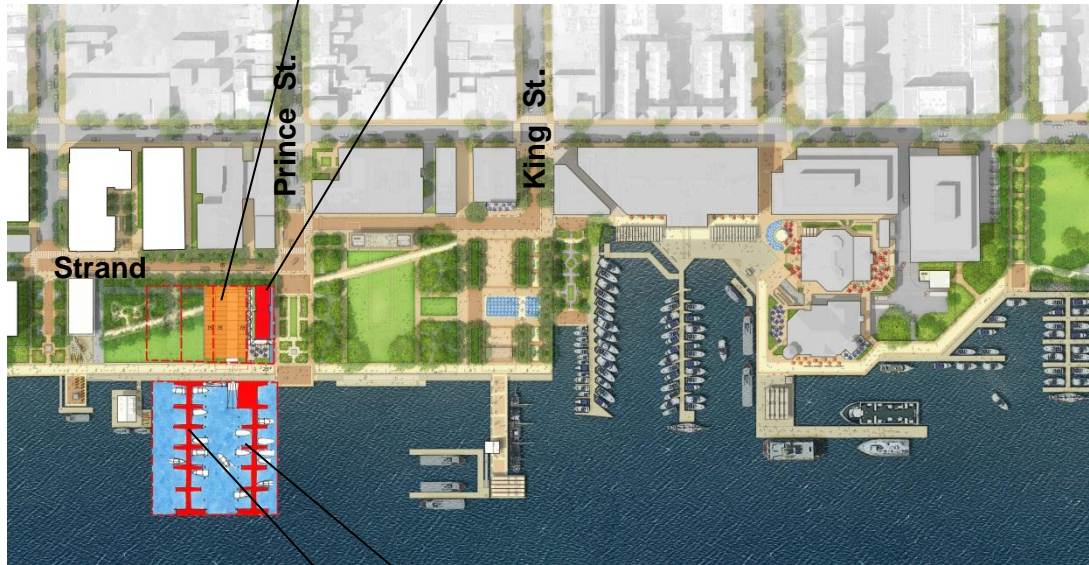
ODBC

**OUTCOME OF THE CITY & ODBC NEGOTIATIONS – MOVE OFFER    OLIN**



**NEW ODBC PARKING LOT 45 SPACES**

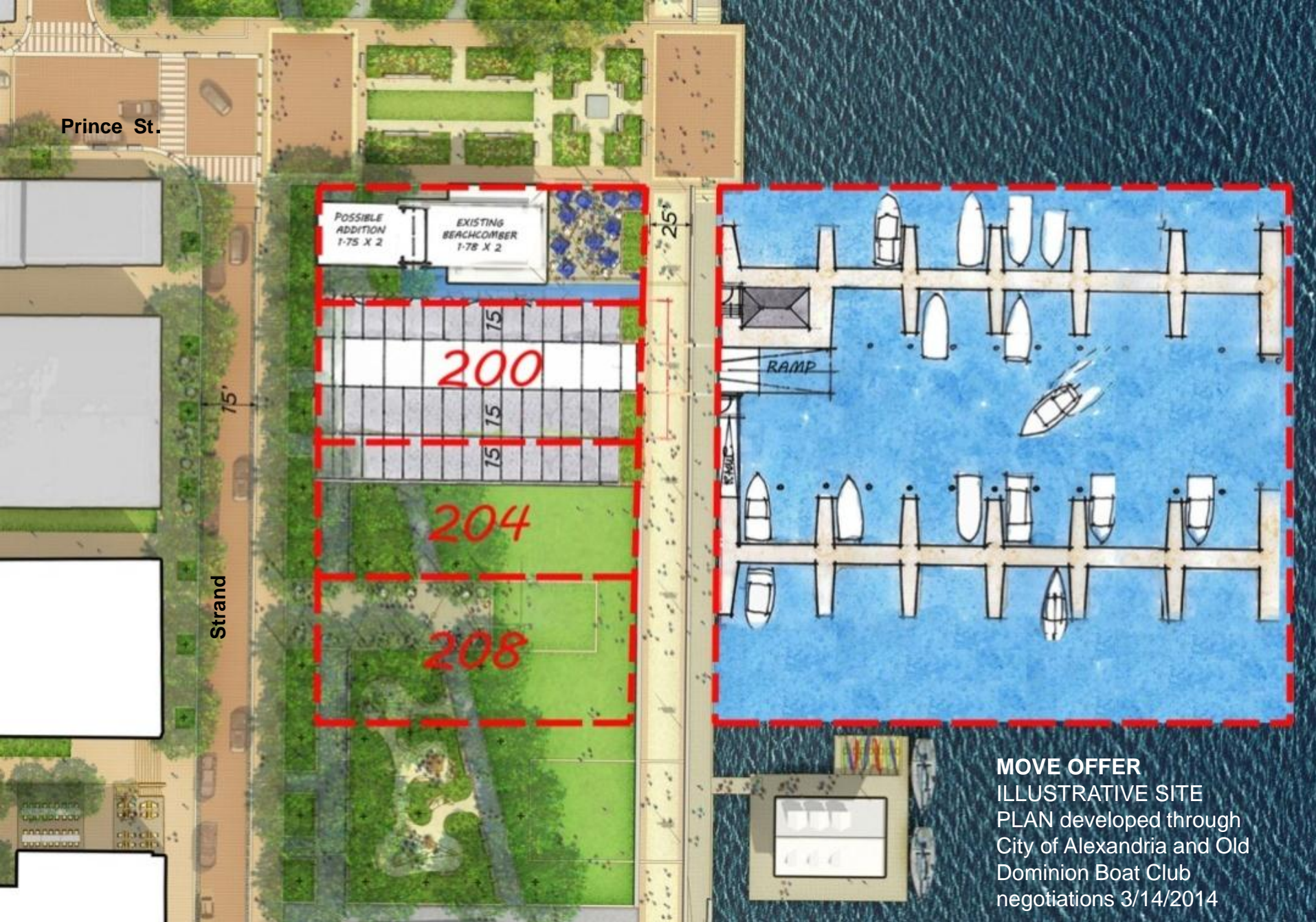
**NEW ODBC CLUBHOUSE**



**NEW ODBC PIERS**

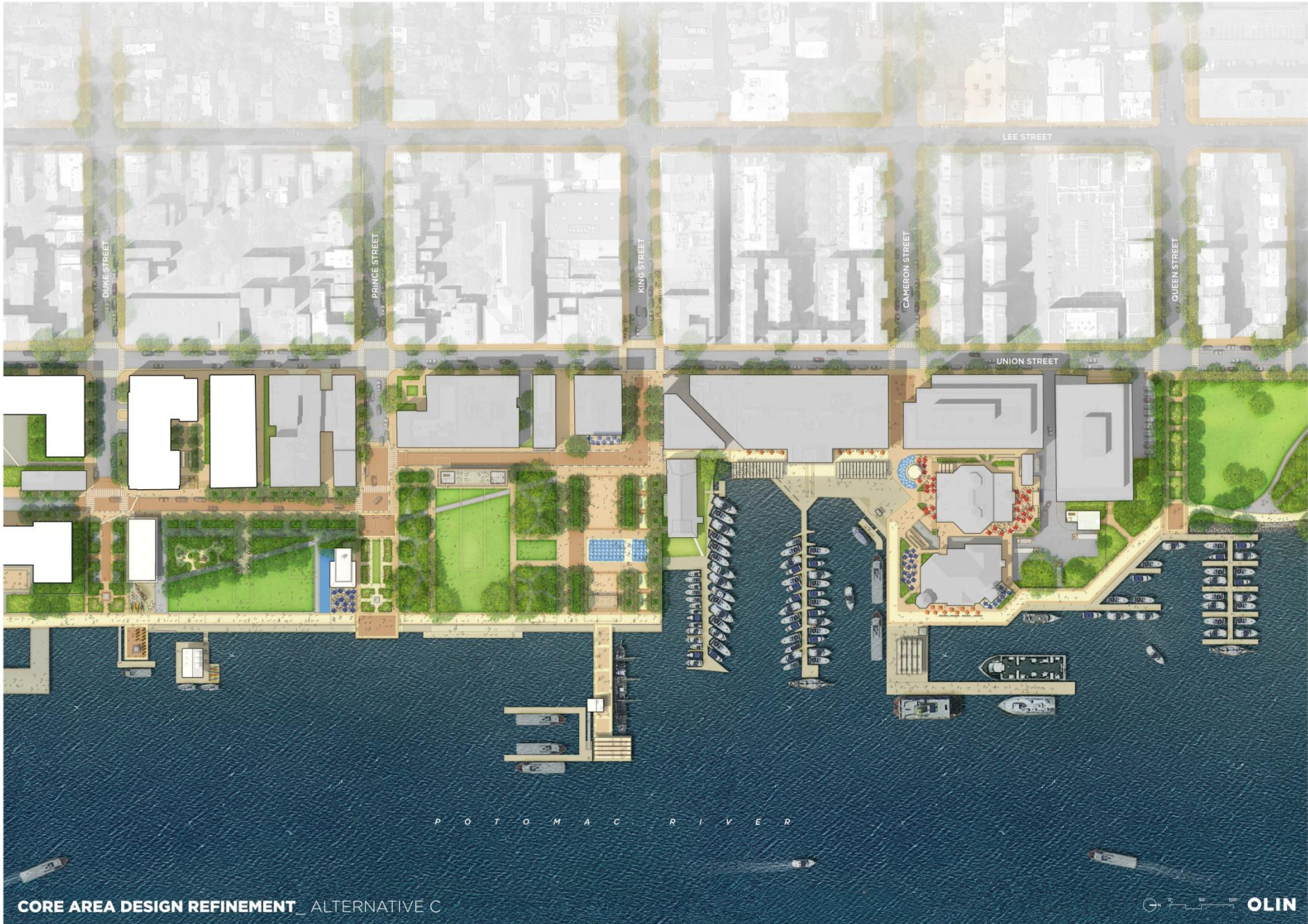
**MOVE OFFER**  
ILLUSTRATIVE SITE PLAN  
developed through City of  
Alexandria and Old  
Dominion Boat Club  
negotiations 3/14/2014



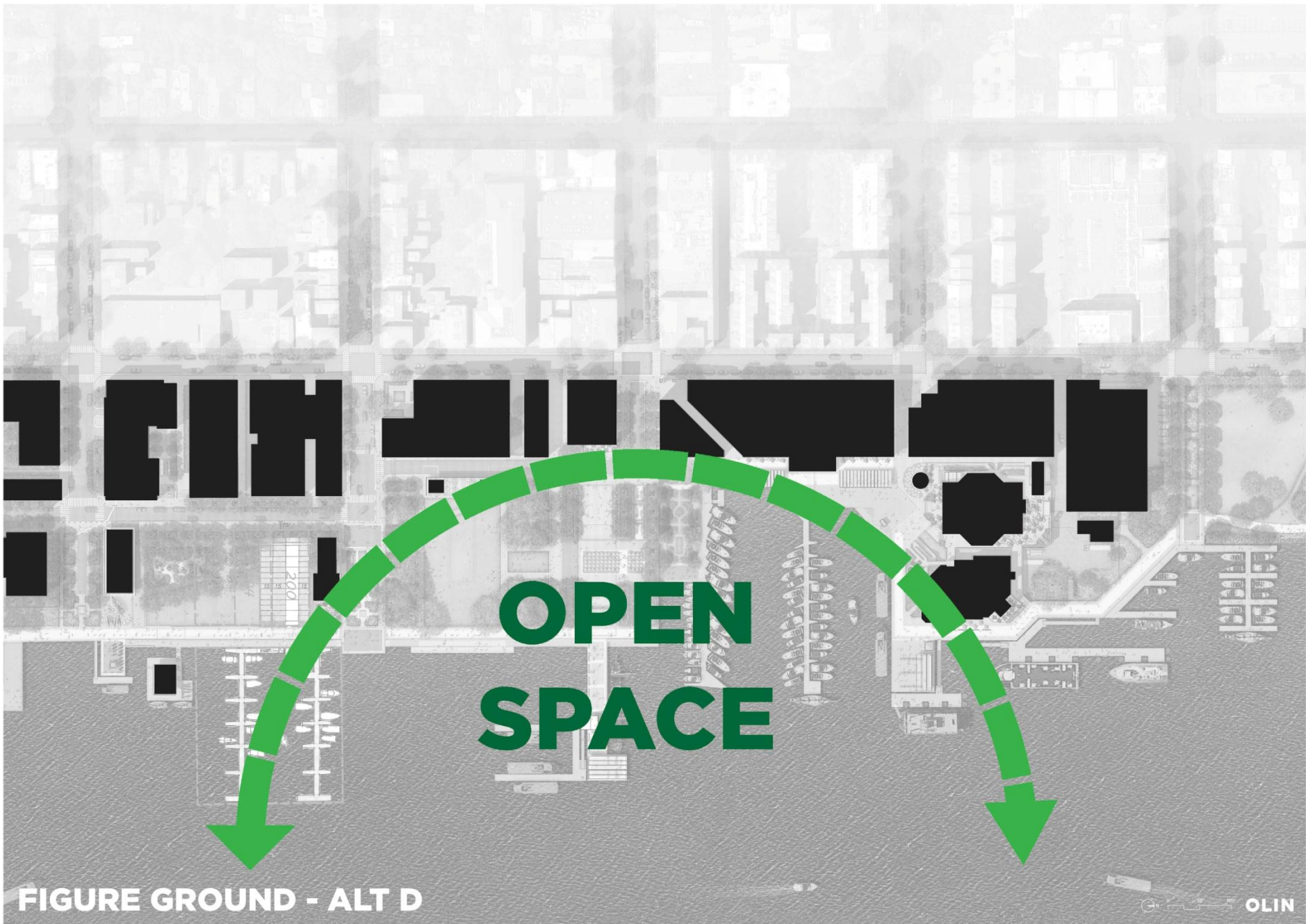


**OUTCOME OF THE CITY & ODBC NEGOTIATIONS – MOVE OFFER** **OLIN**

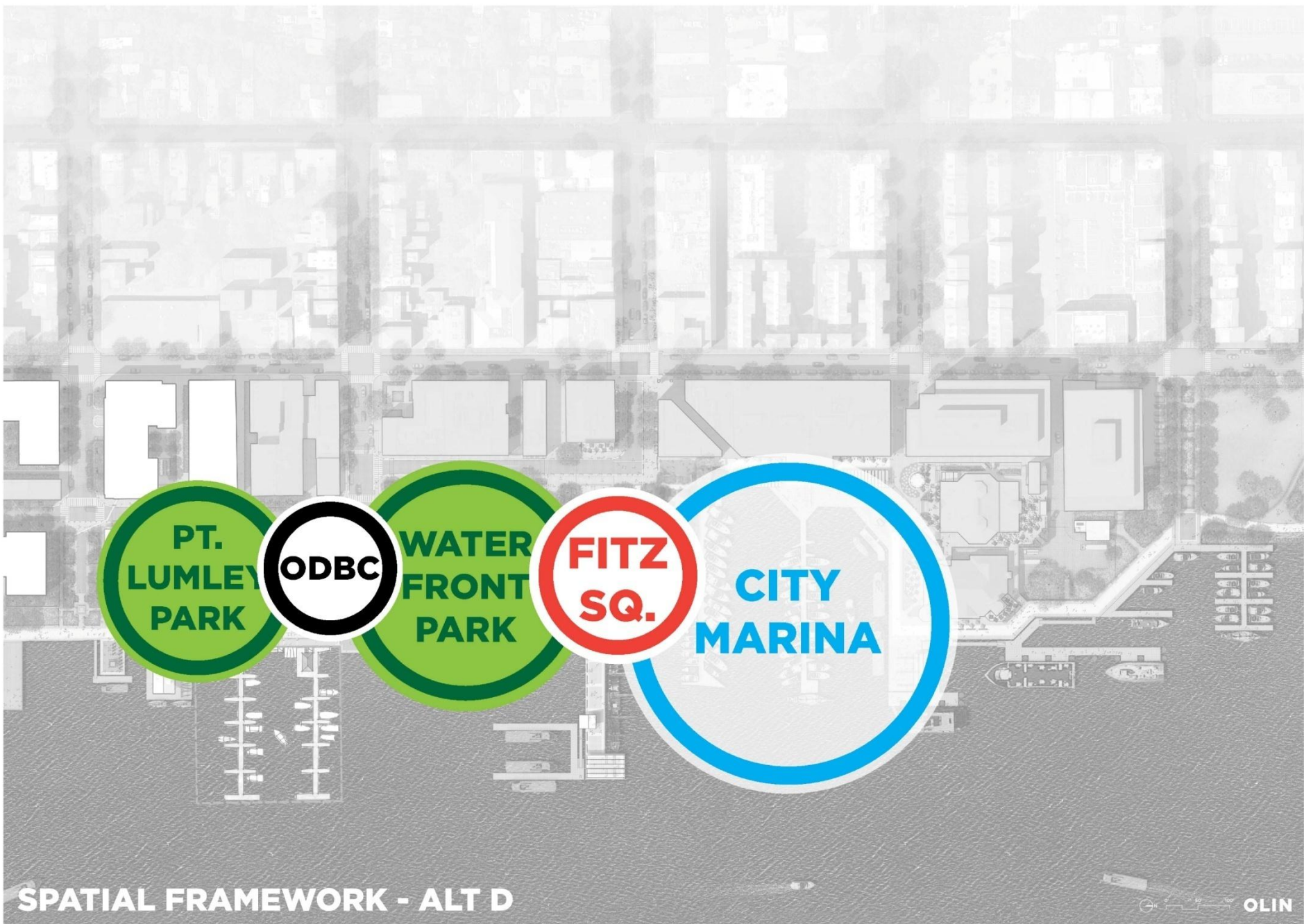






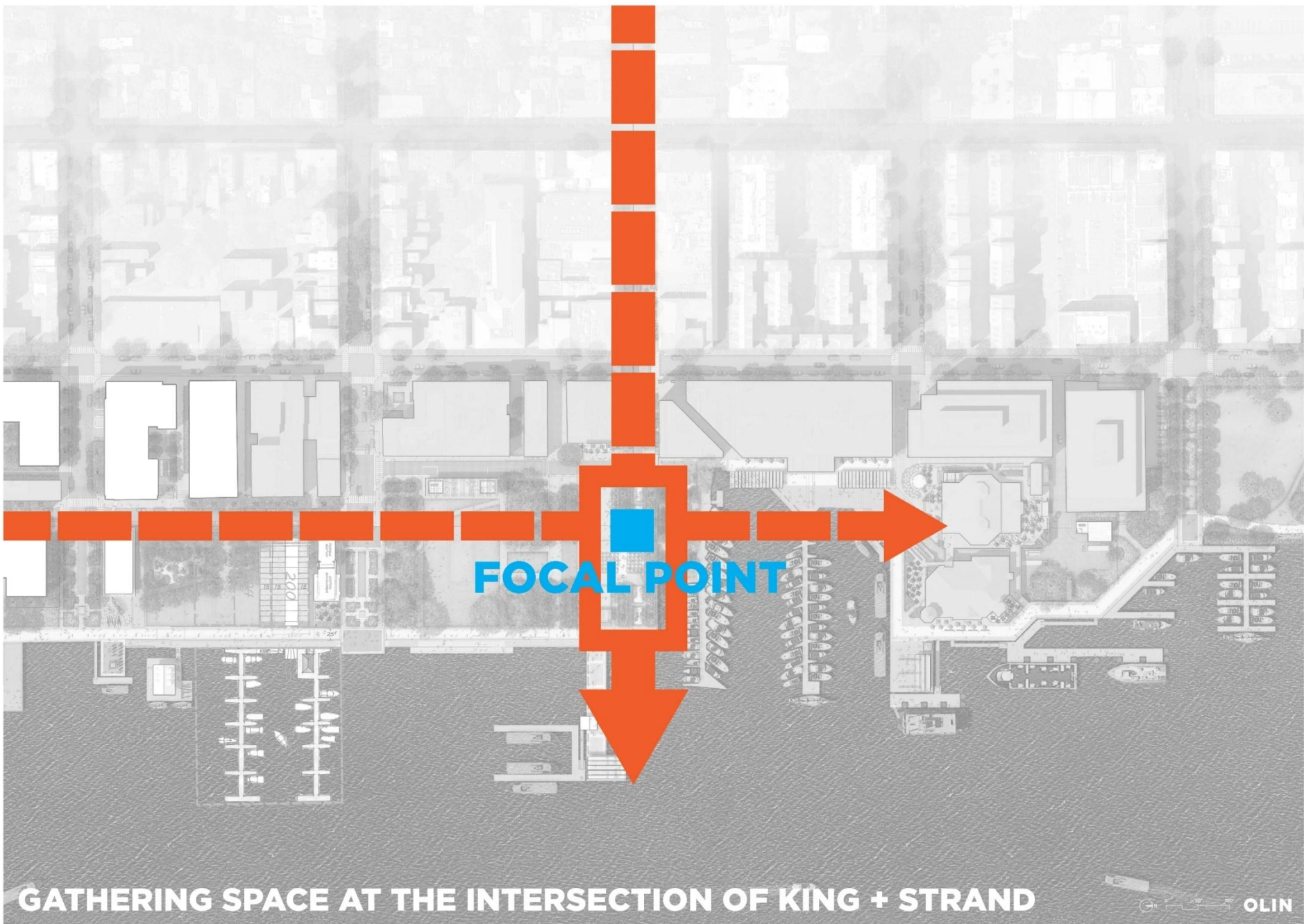


**FIGURE GROUND - ALT D**



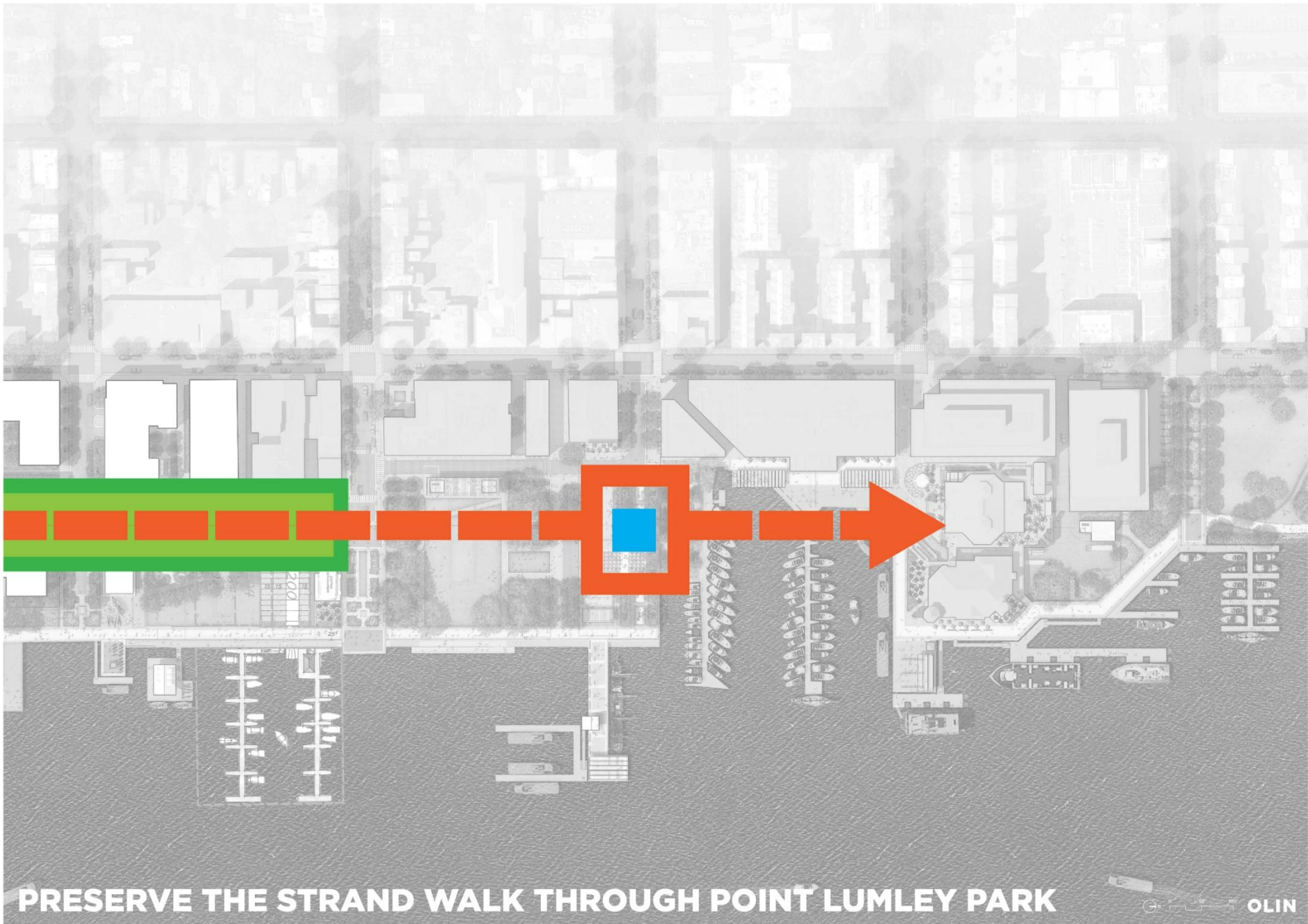
**SPATIAL FRAMEWORK - ALT D**





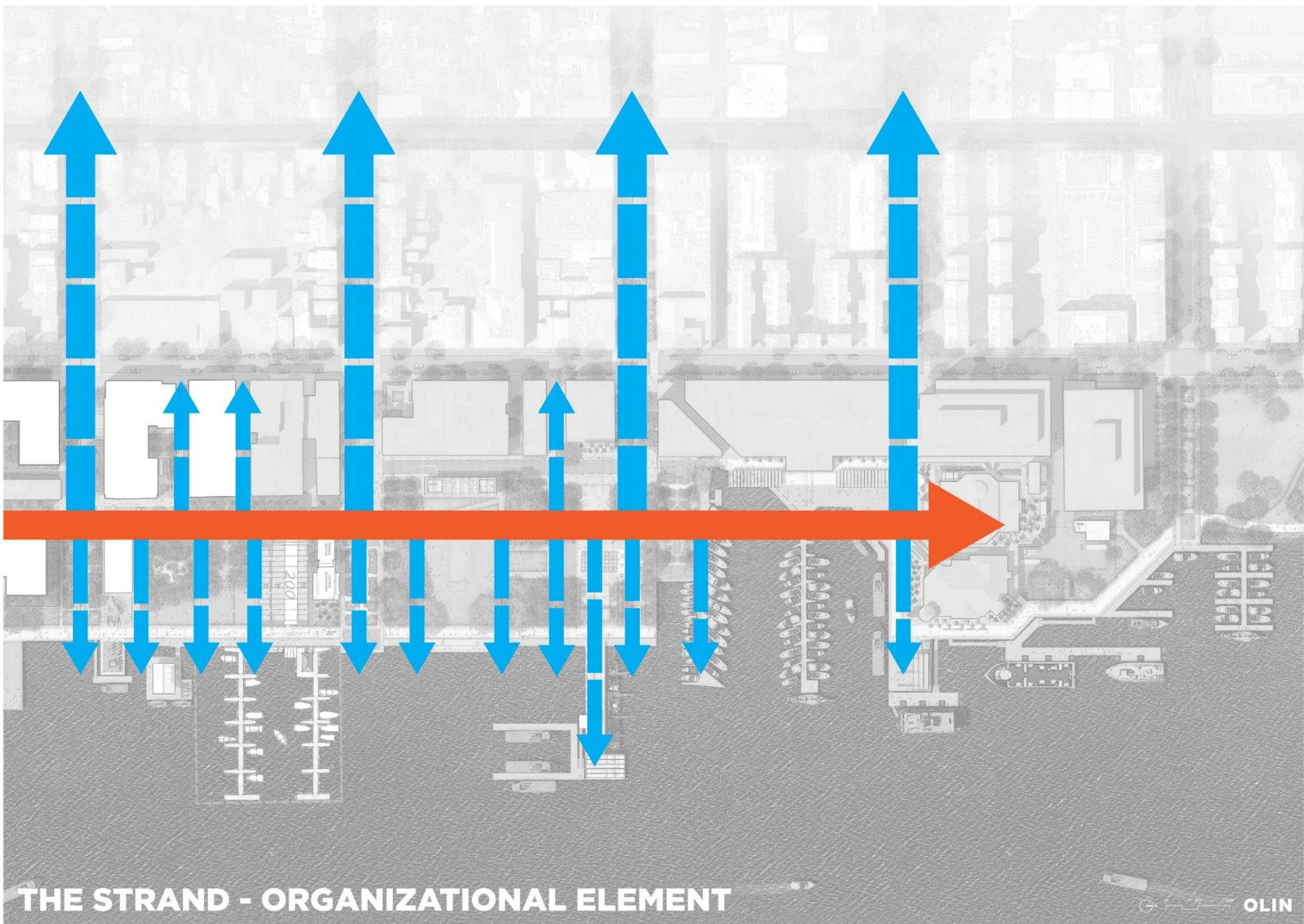
**GATHERING SPACE AT THE INTERSECTION OF KING + STRAND**





**PRESERVE THE STRAND WALK THROUGH POINT LUMLEY PARK**









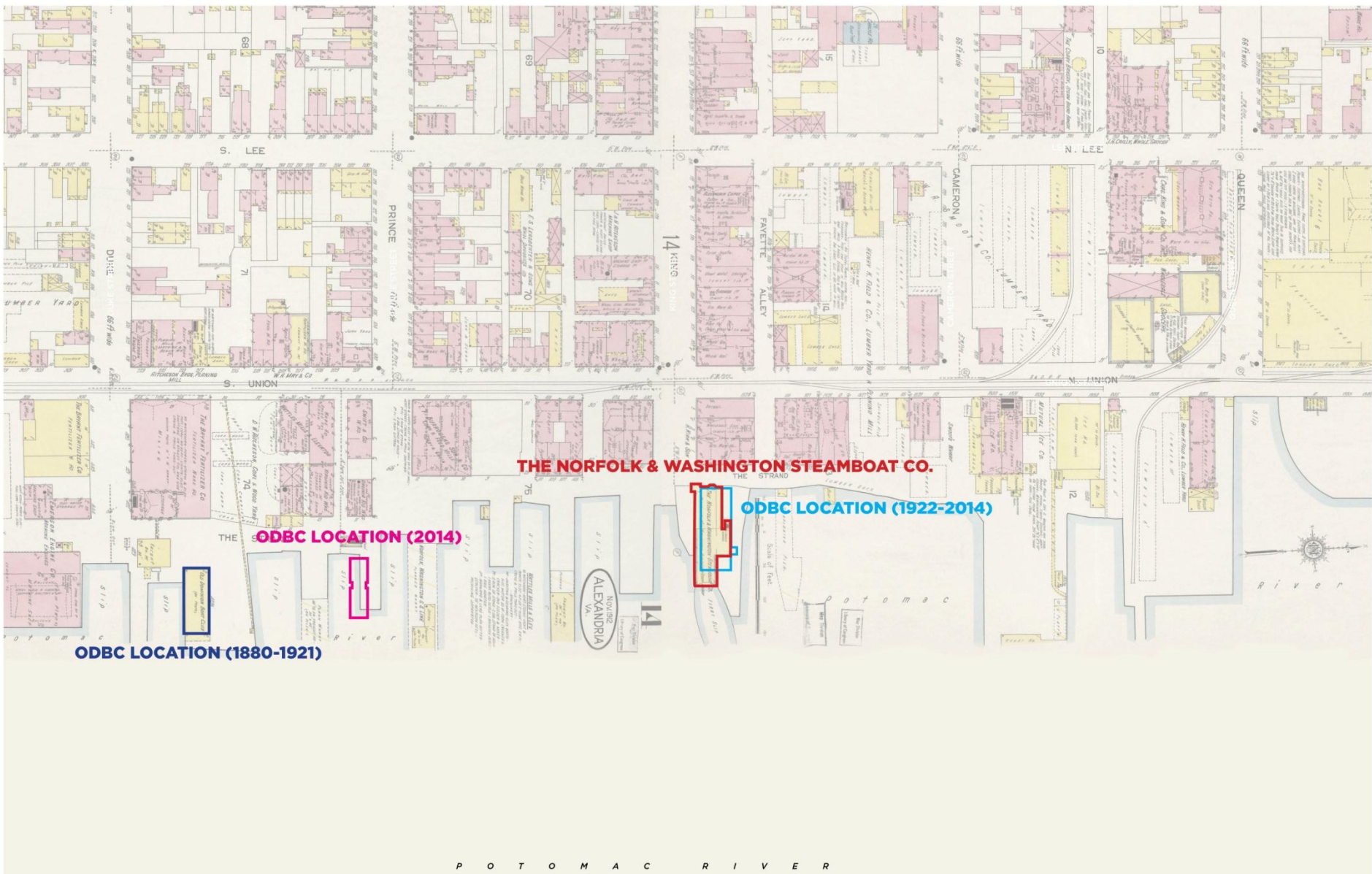
1 Hunting Creek Bridge to Mount Vernon 2 Fort Lyons  
3 Fort Ellsworth 4 Fairfax Seminary 5 PA Regimen  
6 Government Buildings 7 Orange & Alexandria R.R. Depot  
8 Provost Marshall's Office

## BIRDS EYE VIEW OF ALEXANDRIA, VA

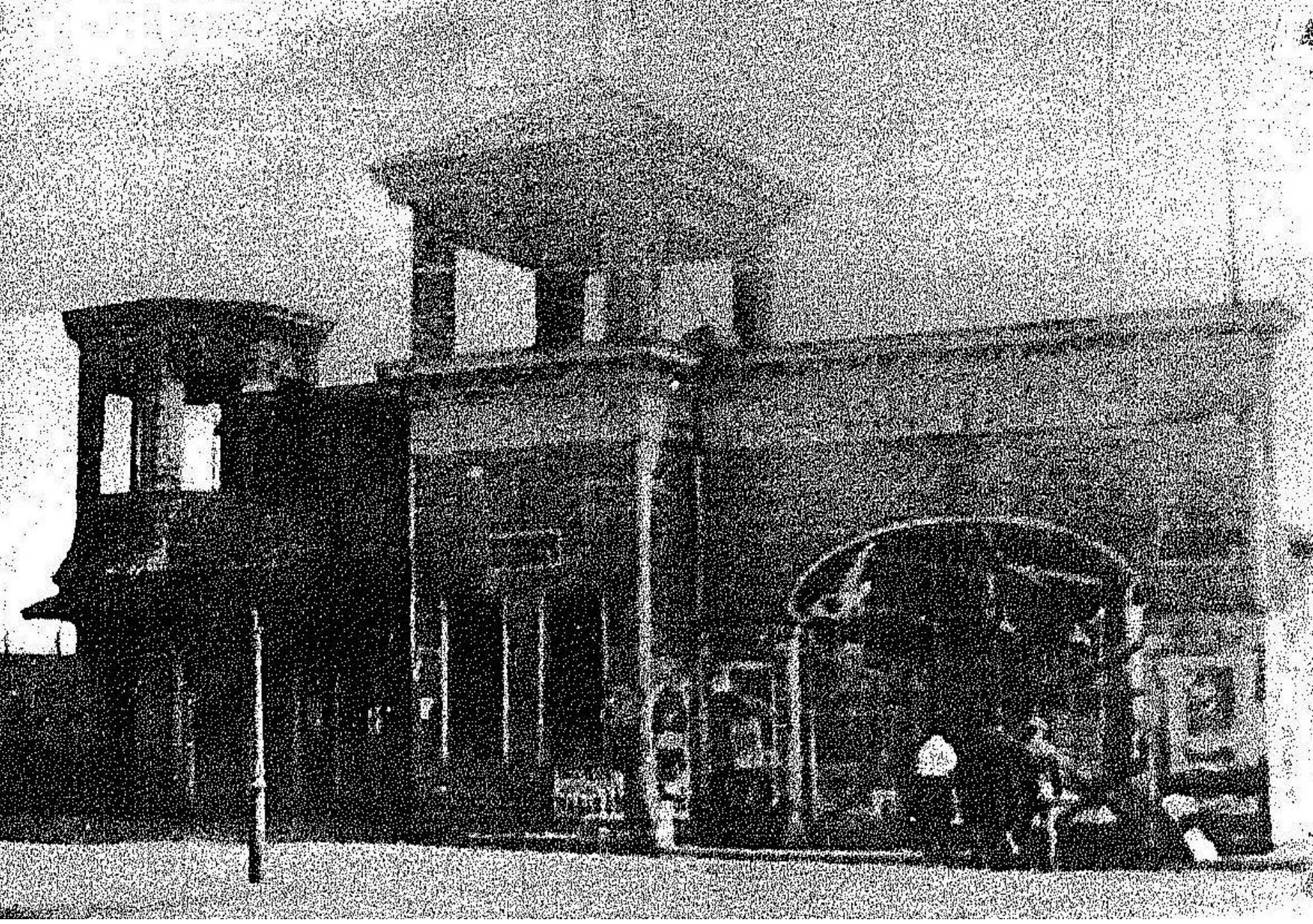
Map Division  
JUN 2 1903  
Library of Congress

9 Quarter Master's Department 10 Custom House Post Office  
and Military Government Headquarters  
11 Monmouth House Hotel  
12 Christ Church (God's Waiting Place of Worship)









**NORFOLK & WASHINGTON STEAMBOAT CO.**

CIRCA 1900



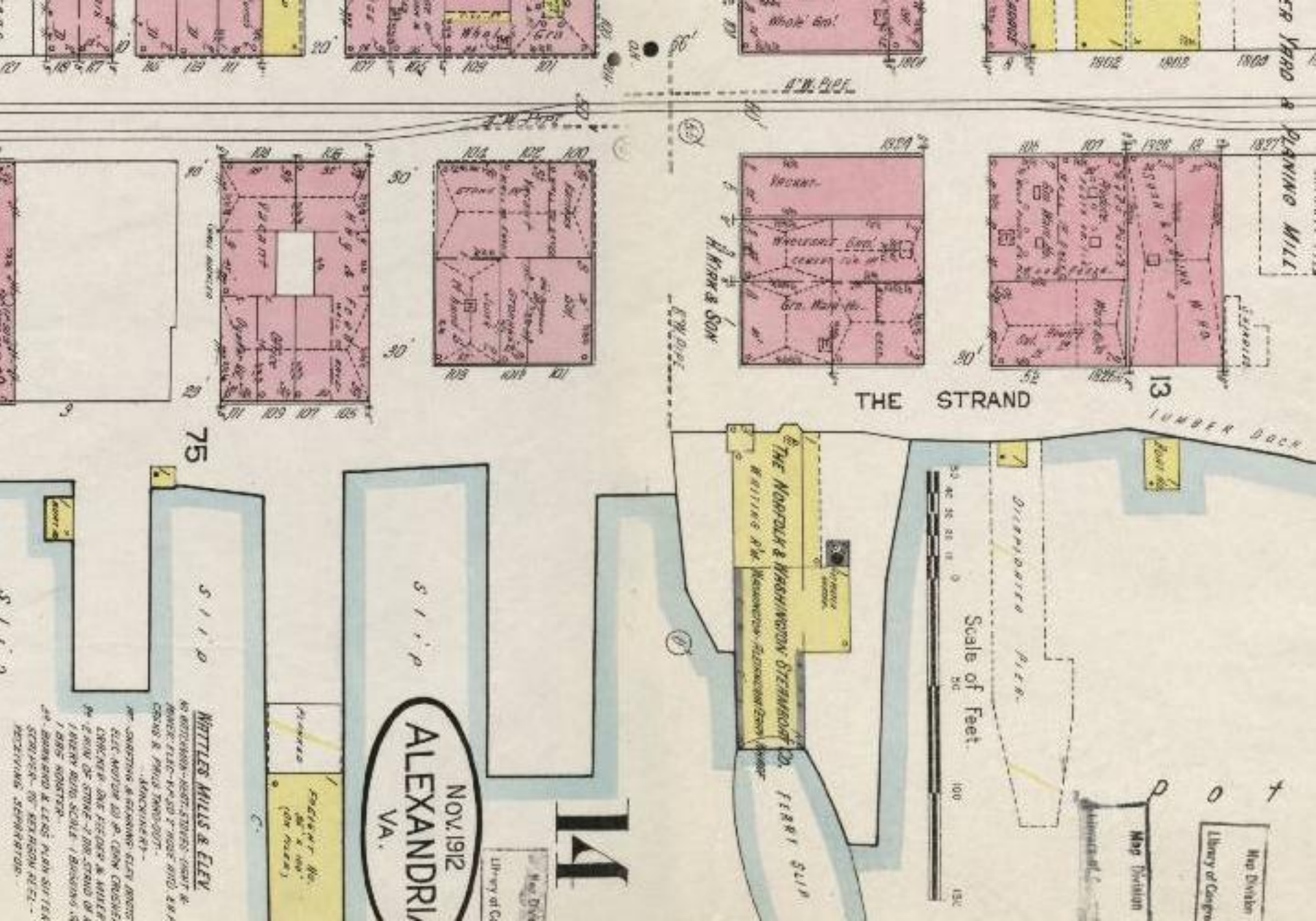


JAMESON,  
ALEXANDRIA,  
VA.

**FOOT OF KING STREET**

CIRCA 1900





FOOT OF KING STREET

1912 SANBORN MAPS

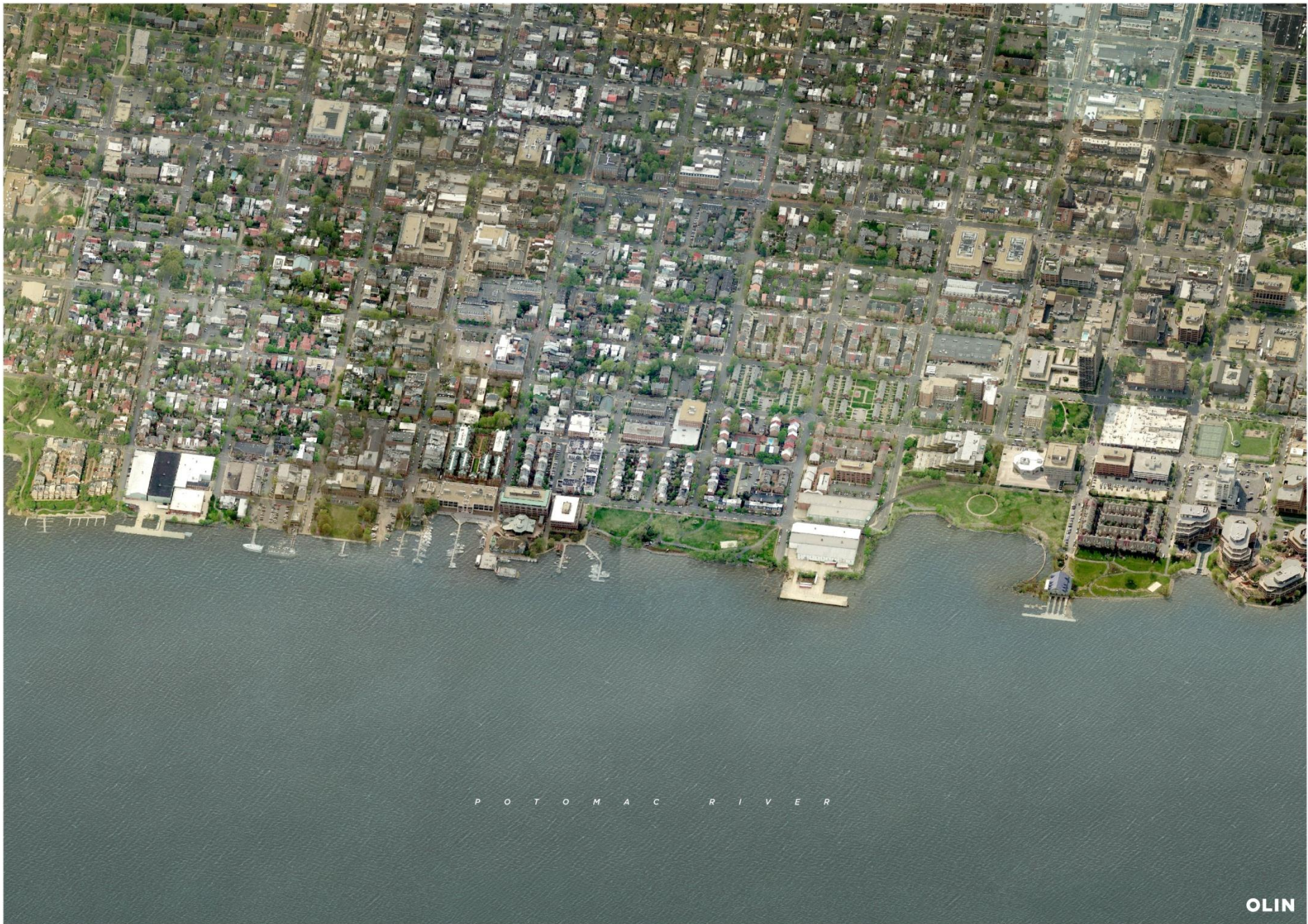




**CORE AREA - DESIGN ALTERNATIVE D**

**OLIN**





P O T O M A C R I V E R





POTOMAC RIVER





P O T O M A C R I V E R









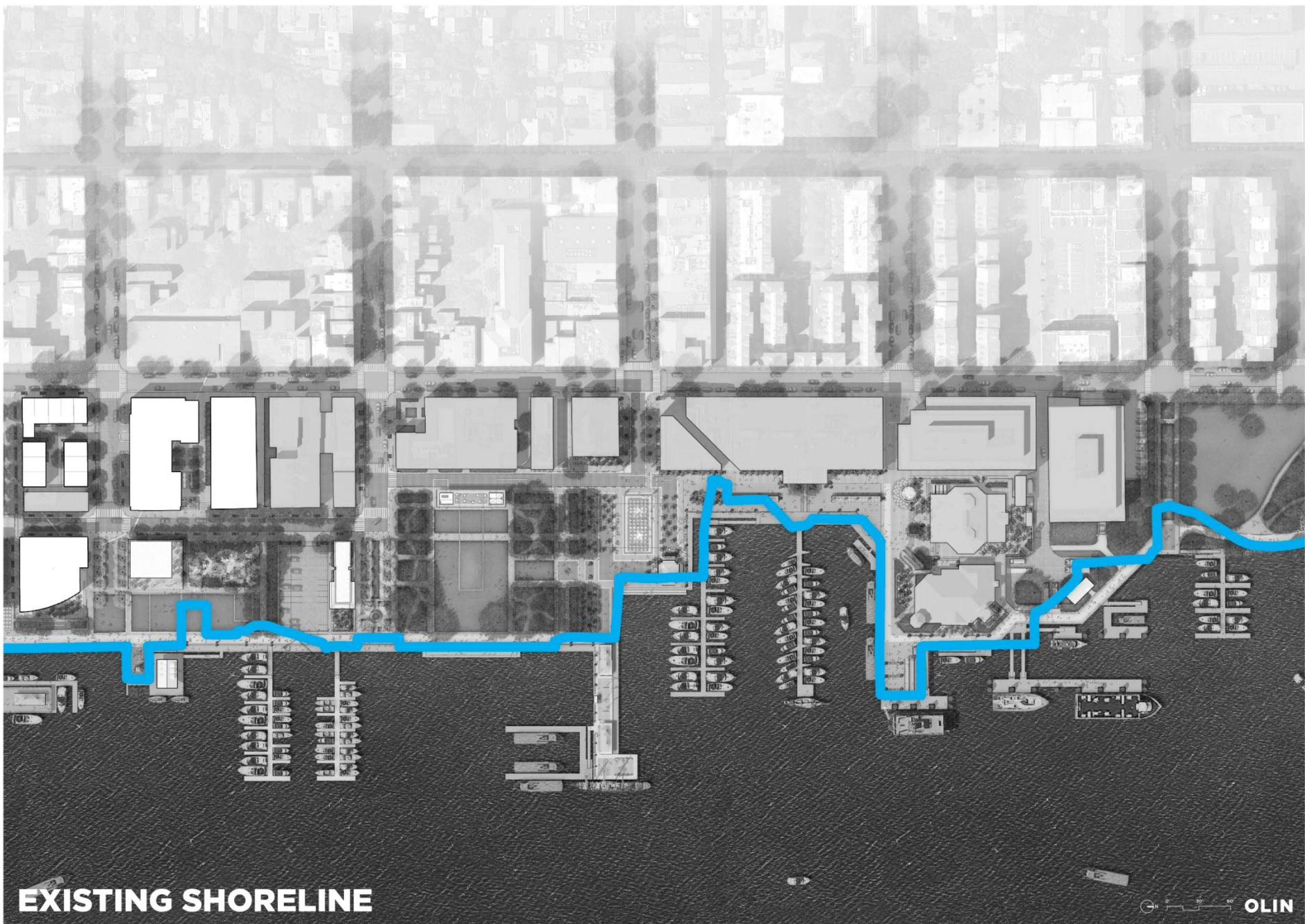






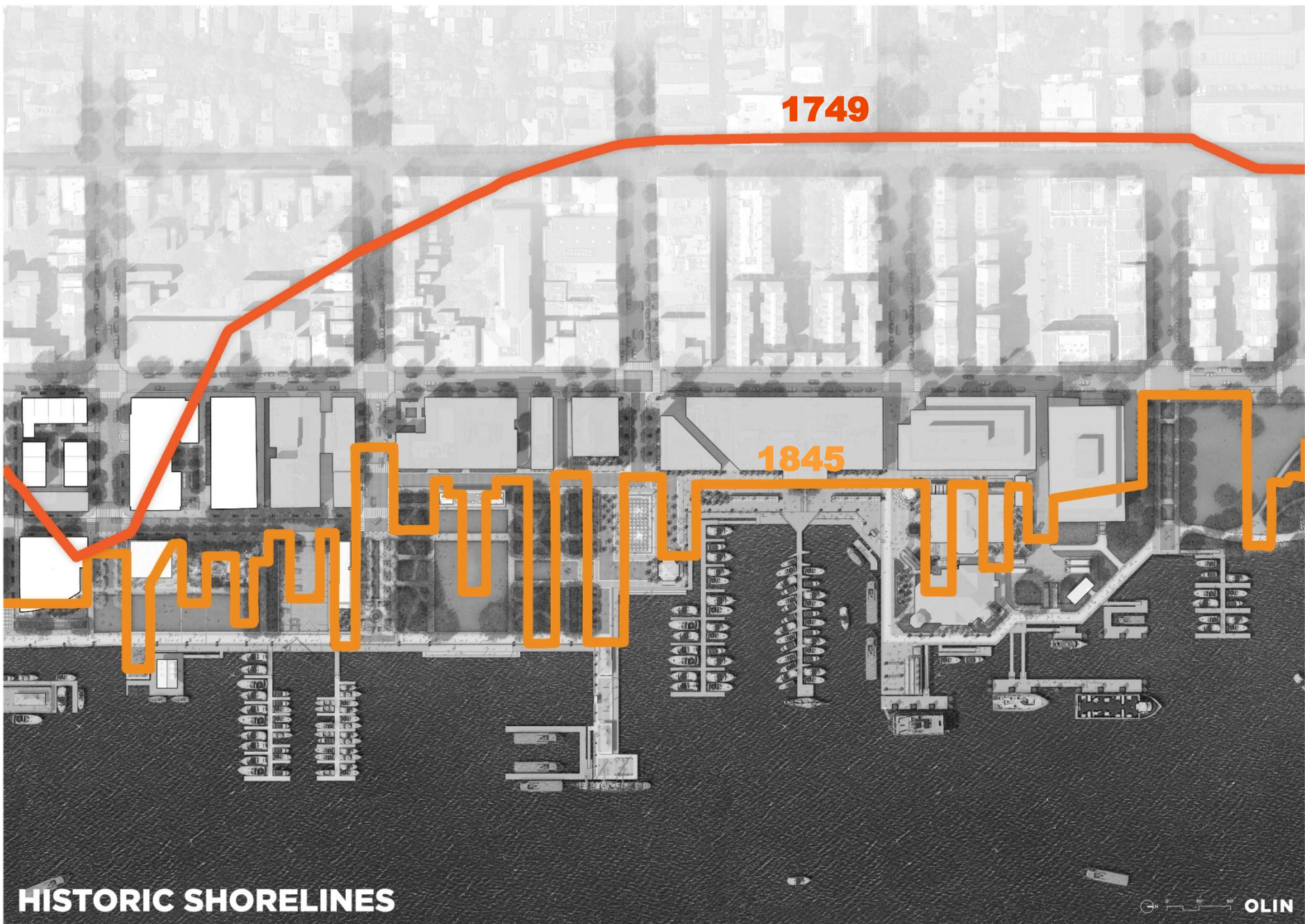






**EXISTING SHORELINE**





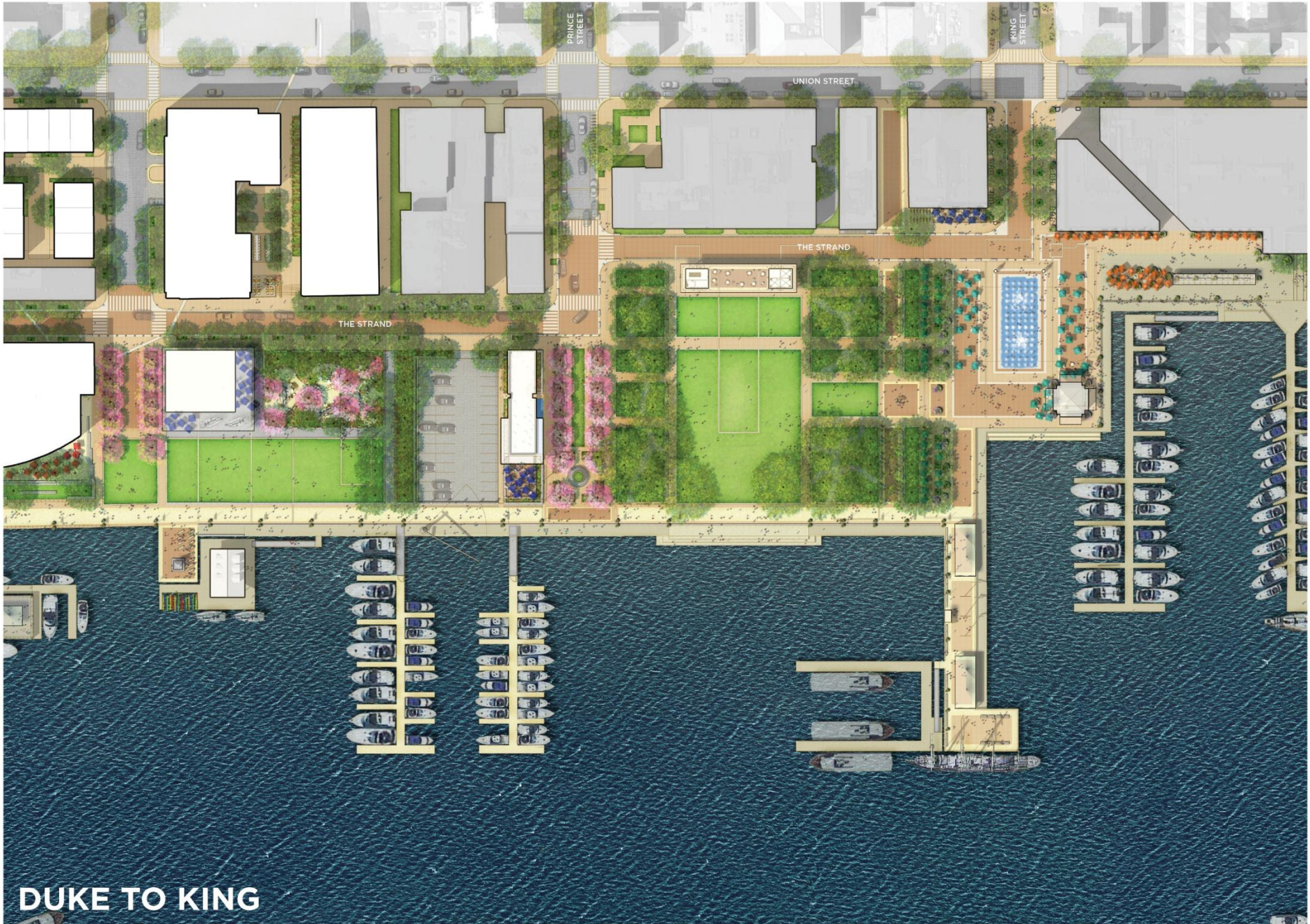
1749

1845

HISTORIC SHORELINES

0 30' 60' OLIN





DUKE TO KING





- 1 ROBINSON TERMINAL REDEVELOPMENT
- 2 WATERFRONT PROMENADE AND IMPROVED BULKHEAD
- 3 DUKE STREET GARDENS
- 4 POINT LUMLEY PIER WITH MOVEABLE SEATING
- 5 SEAPORT FOUNDATION FLOATING MUSEUM
- 6 CIVIC BUILDING
- 7 EXHIBITION AREA & FLEXIBLE EVENT SPACE
- 8 CARR HOTEL REDEVELOPMENT
- 9 REALIGNED STRAND WITH IMPROVED PEDESTRIAN EXPERIENCE
- 10 CUMMINGS TURNER REDEVELOPMENT
- 11 CHILDREN'S PLAY GARDEN

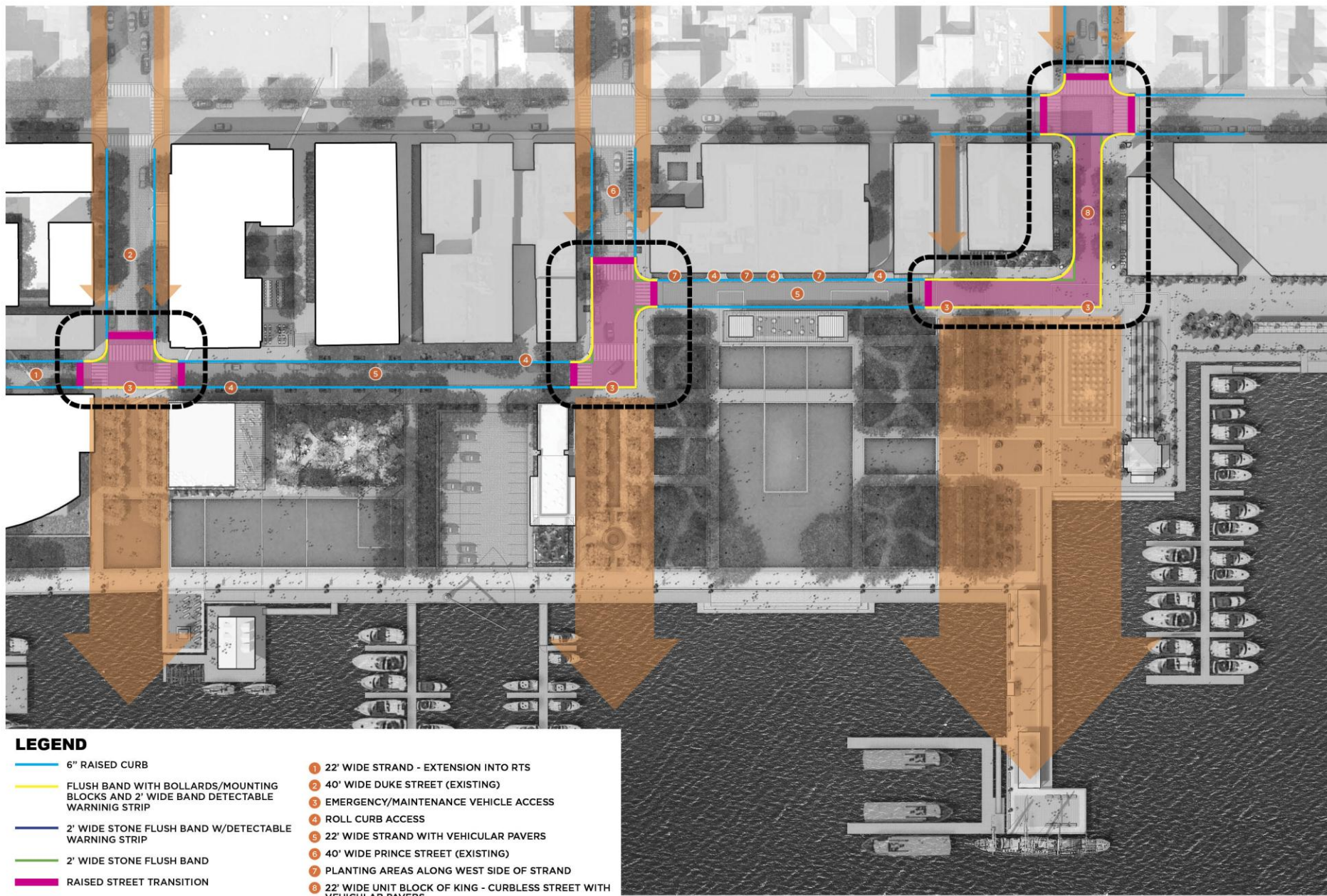
- 12 LAWN
- 13 LOWER PROMENADE
- 14 ALLEY WALK
- 15 PROPOSED ODBC PARKING LOT
- 16 PROPOSED ODBC BUILDING
- 17 PROPOSED ODBC DOCKS
- 18 CHADWICKS RESTAURANT
- 19 PRINCE STREET GARDENS
- 20 CAPITOL BIKE SHARE
- 21 PRESERVATION OF EXISTING TREES WITH UNDERSTORY
- 22 FACILITY FOR PUMPHOUSE, RESTROOMS & STORAGE

- 23 SHADE STRUCTURE
- 24 WATERFRONT PARK LAWN
- 25 STEPS TO THE WATER
- 26 WALES ALLEY
- 27 KING STREET PIER WITH SEATING AND SHADE STRUCTURE
- 28 WATER TAXI DOCK
- 29 HISTORIC SHIP
- 30 PEDESTRIANIZED STRAND WITH LIMITED VEHICLE ACCESS
- 31 BIKE PARKING HUB
- 32 MAI THAI RESTAURANT

- 33 WATERFRONT MARKET
- 34 FITZGERALD SQUARE WITH WATER FEATURE AND ICE SKATING
- 35 SEASONAL SHADE STRUCTURE
- 36 CONCESSIONS WITH OVERLOOK
- 37 STEPS TO THE WATER
- 38 PIERS
- 39 PATH REALIGNMENT
- 40 TORPEDO FACTORY

# DUKE TO KING





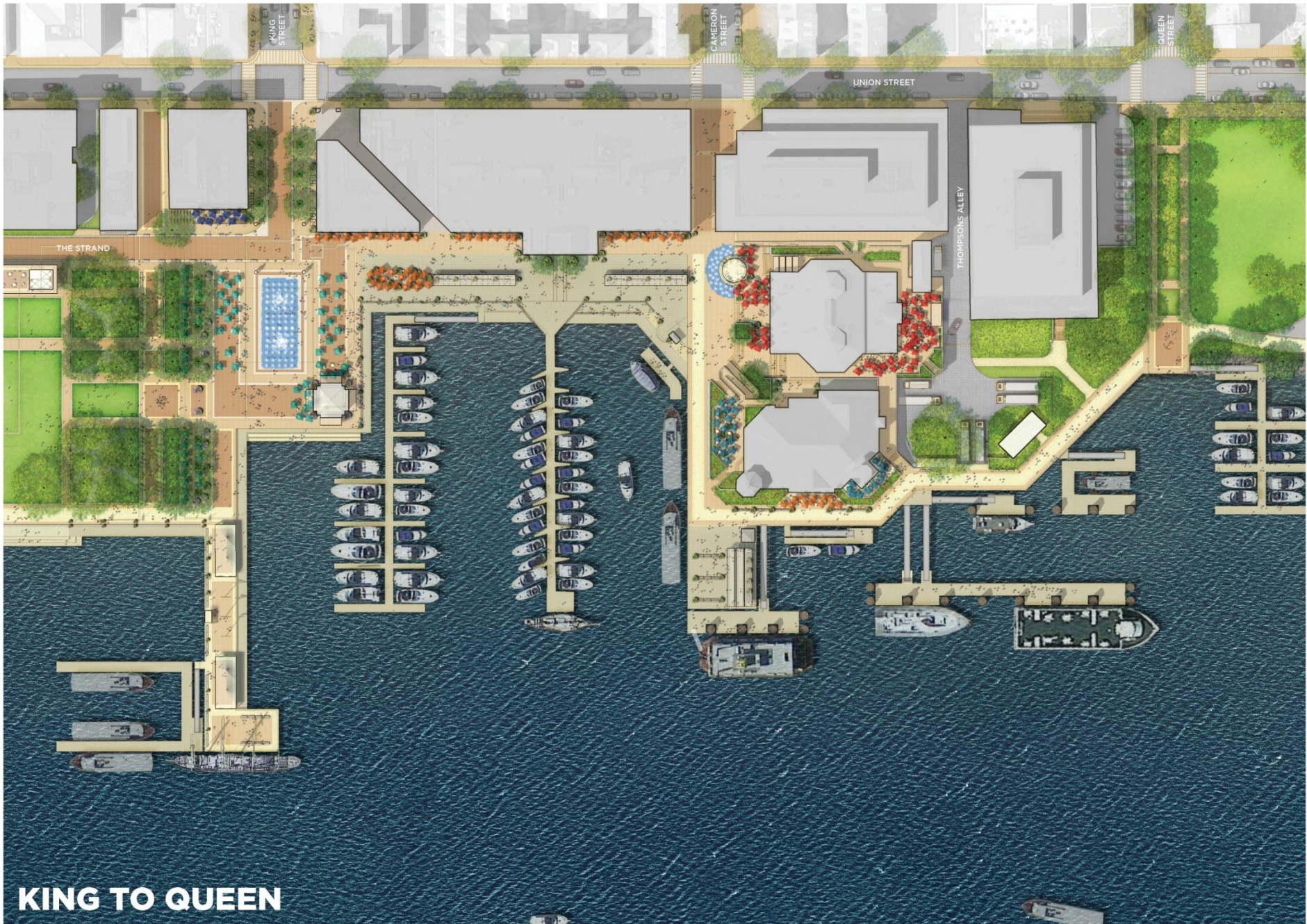
**LEGEND**

- 6" RAISED CURB
- FLUSH BAND WITH BOLLARDS/MOUNTING BLOCKS AND 2' WIDE BAND DETECTABLE WARNING STRIP
- 2' WIDE STONE FLUSH BAND W/DETECTABLE WARNING STRIP
- 2' WIDE STONE FLUSH BAND
- RAISED STREET TRANSITION
- RAISED STREET

- 1 22' WIDE STRAND - EXTENSION INTO RTS
- 2 40' WIDE DUKE STREET (EXISTING)
- 3 EMERGENCY/MAINTENANCE VEHICLE ACCESS
- 4 ROLL CURB ACCESS
- 5 22' WIDE STRAND WITH VEHICULAR PAVERS
- 6 40' WIDE PRINCE STREET (EXISTING)
- 7 PLANTING AREAS ALONG WEST SIDE OF STRAND
- 8 22' WIDE UNIT BLOCK OF KING - CURBLESS STREET WITH VEHICULAR PAVERS

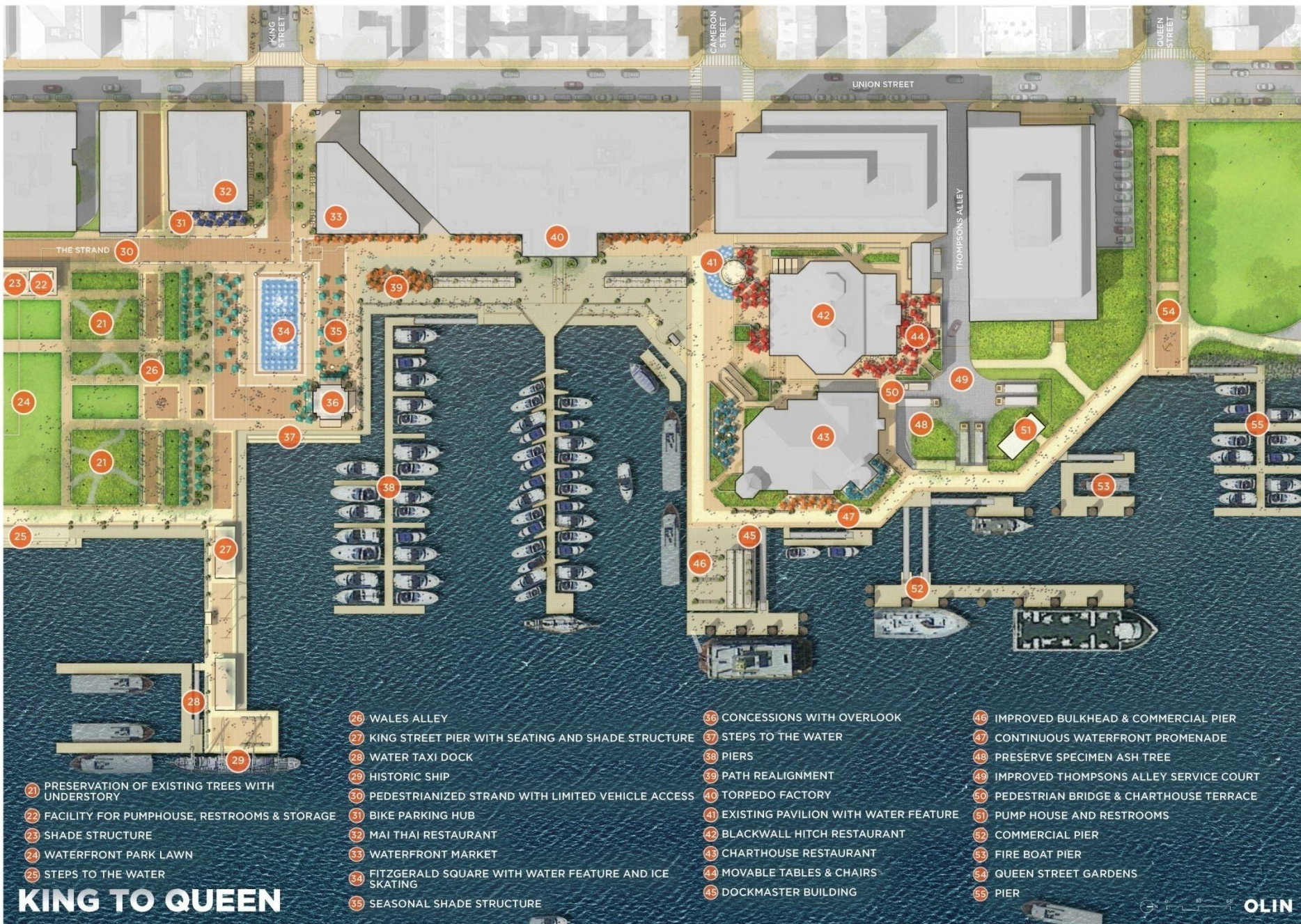






**KING TO QUEEN**





- 21 PRESERVATION OF EXISTING TREES WITH UNDERSTORY
- 22 FACILITY FOR PUMPHOUSE, RESTROOMS & STORAGE
- 23 SHADE STRUCTURE
- 24 WATERFRONT PARK LAWN
- 25 STEPS TO THE WATER

## KING TO QUEEN

- 26 WALES ALLEY
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- 36 CONCESSIONS WITH OVERLOOK
- 37 STEPS TO THE WATER
- 38 PIERS
- 39 PATH REALIGNMENT
- 40 TORPEDO FACTORY
- 41 EXISTING PAVILION WITH WATER FEATURE
- 42 BLACKWALL HITCH RESTAURANT
- 43 CHARHOUSE RESTAURANT
- 44 MOVABLE TABLES & CHAIRS
- 45 DOCKMASTER BUILDING

- 46 IMPROVED BULKHEAD & COMMERCIAL PIER
- 47 CONTINUOUS WATERFRONT PROMENADE
- 48 PRESERVE SPECIMEN ASH TREE
- 49 IMPROVED THOMPSONS ALLEY SERVICE COURT
- 50 PEDESTRIAN BRIDGE & CHARHOUSE TERRACE
- 51 PUMP HOUSE AND RESTROOMS
- 52 COMMERCIAL PIER
- 53 FIRE BOAT PIER
- 54 QUEEN STREET GARDENS
- 55 PIER





**WATER FEATURE - INTERACTIVE**

TORONTO, ONTARIO





**WATER FEATURE - REFLECTIVE**









**SEASONAL PROGRAMMING**

**WATERFRONT WINTERFEST – PHILADELPHIA, PA**





**SEASONAL PROGRAMMING**

**WATERFRONT WINTERFEST – PHILADELPHIA, PA**





**SEASONAL PROGRAMMING**

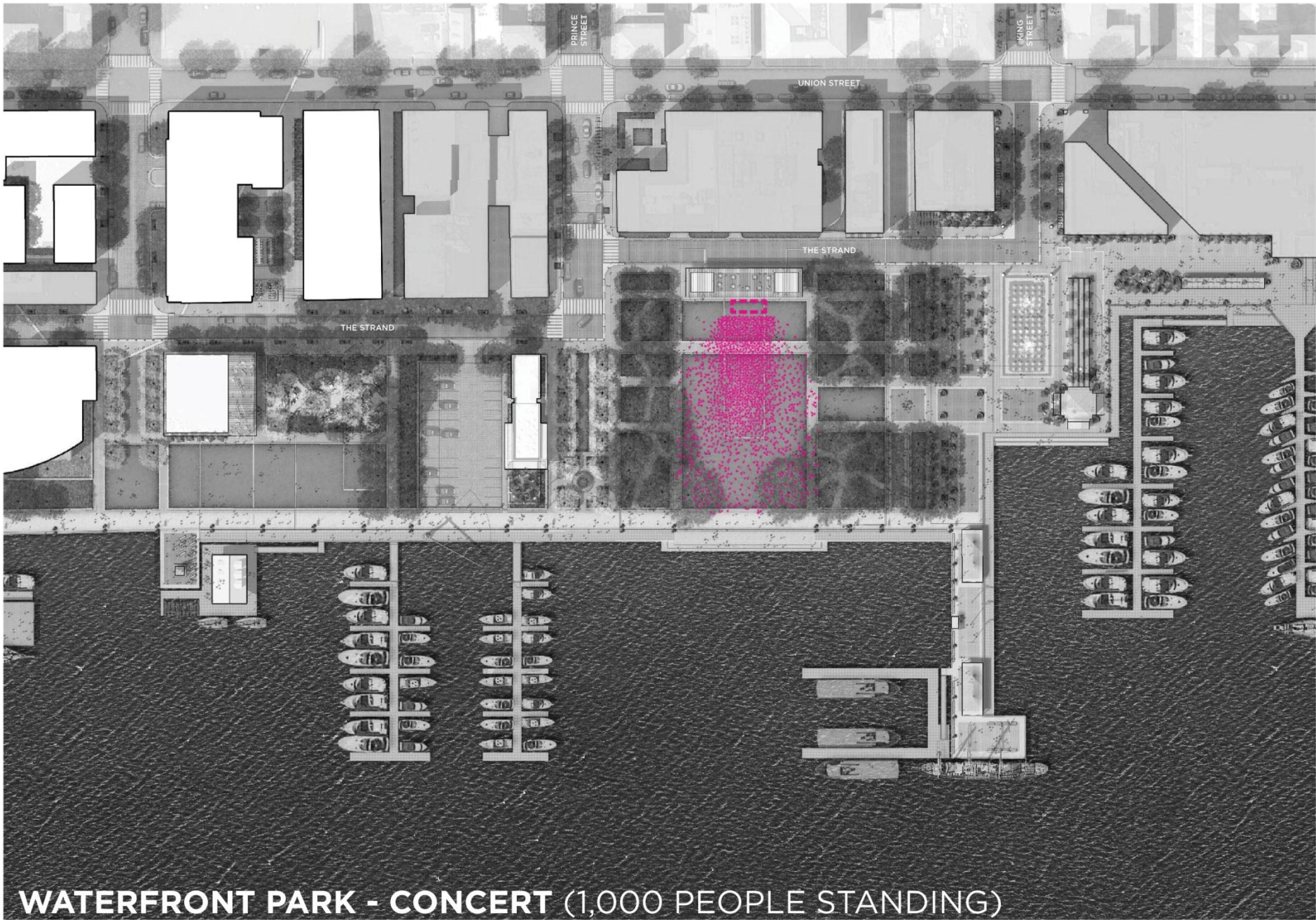
**WATERFRONT WINTERFEST – PHILADELPHIA, PA**





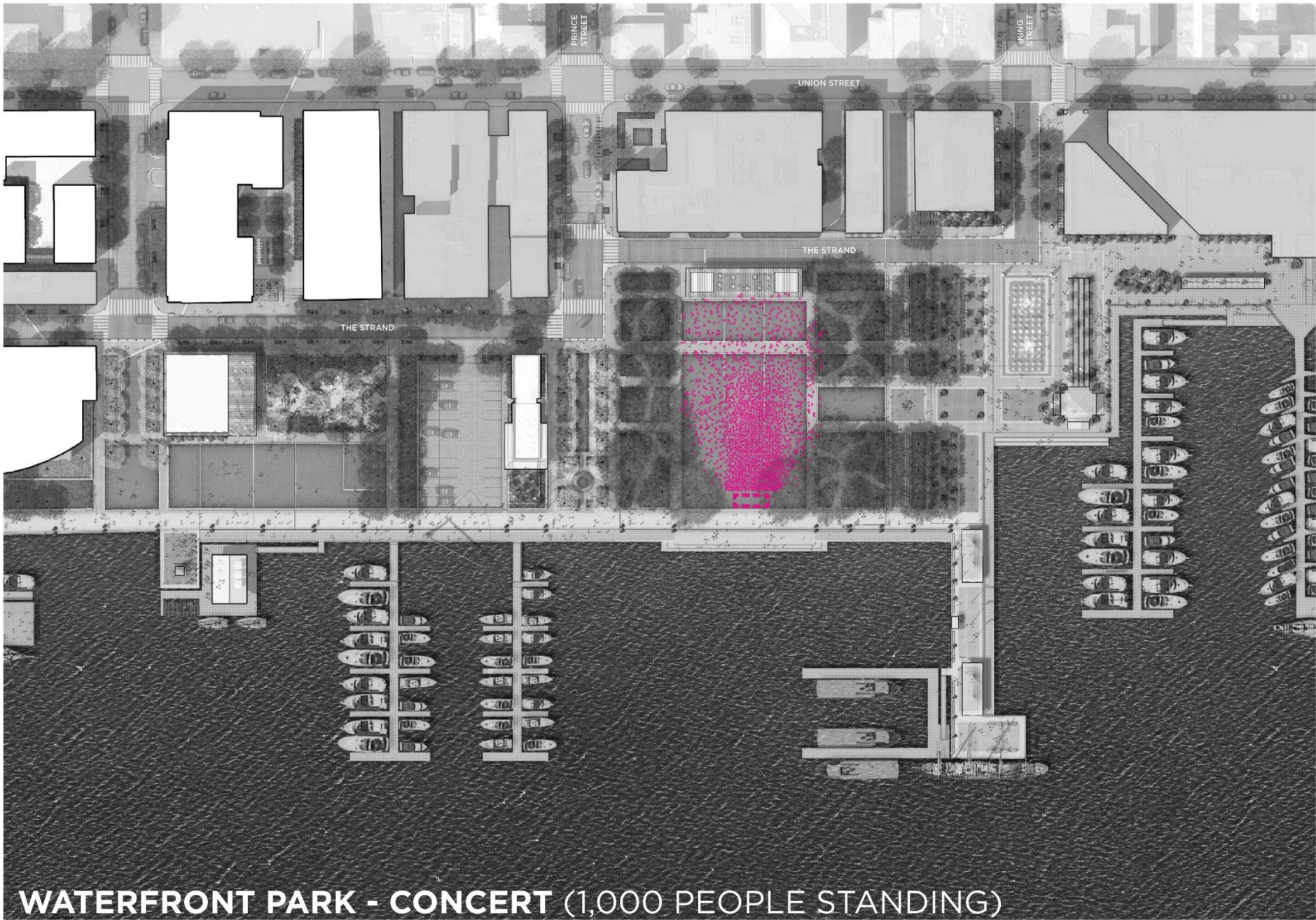
PT LUMLEY PARK - BOCCE





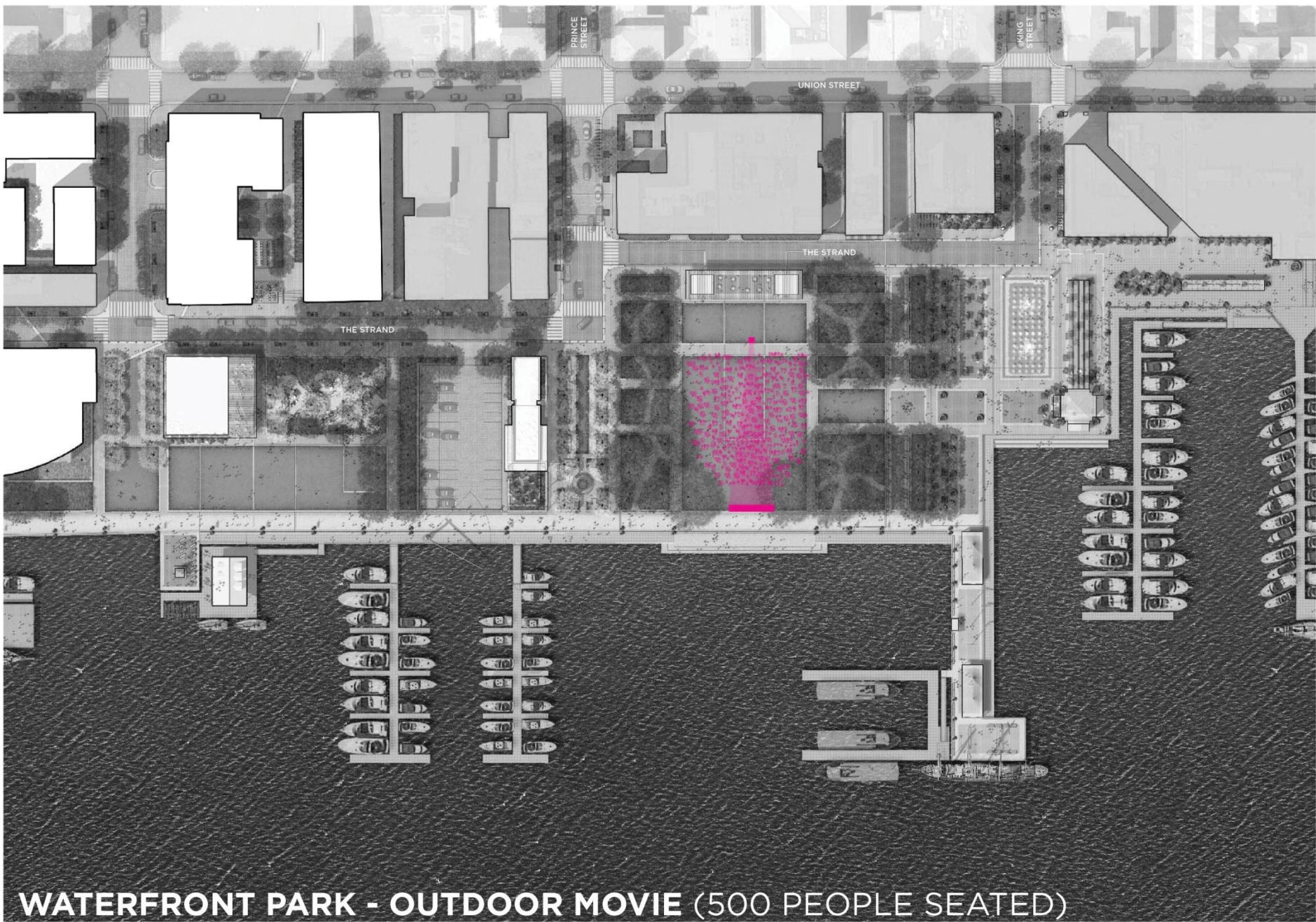
**WATERFRONT PARK - CONCERT (1,000 PEOPLE STANDING)**





**WATERFRONT PARK - CONCERT (1,000 PEOPLE STANDING)**





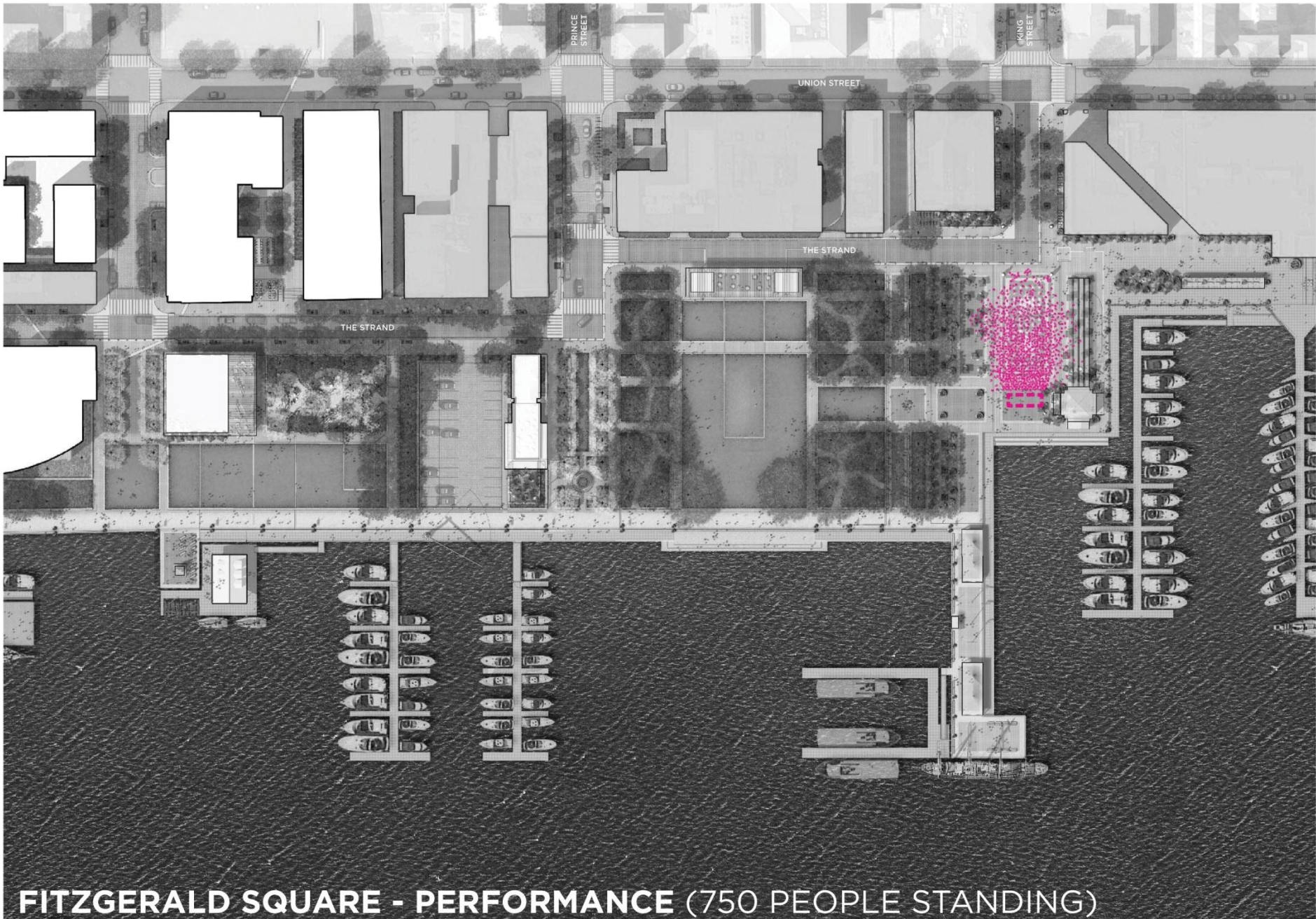
**WATERFRONT PARK - OUTDOOR MOVIE (500 PEOPLE SEATED)**





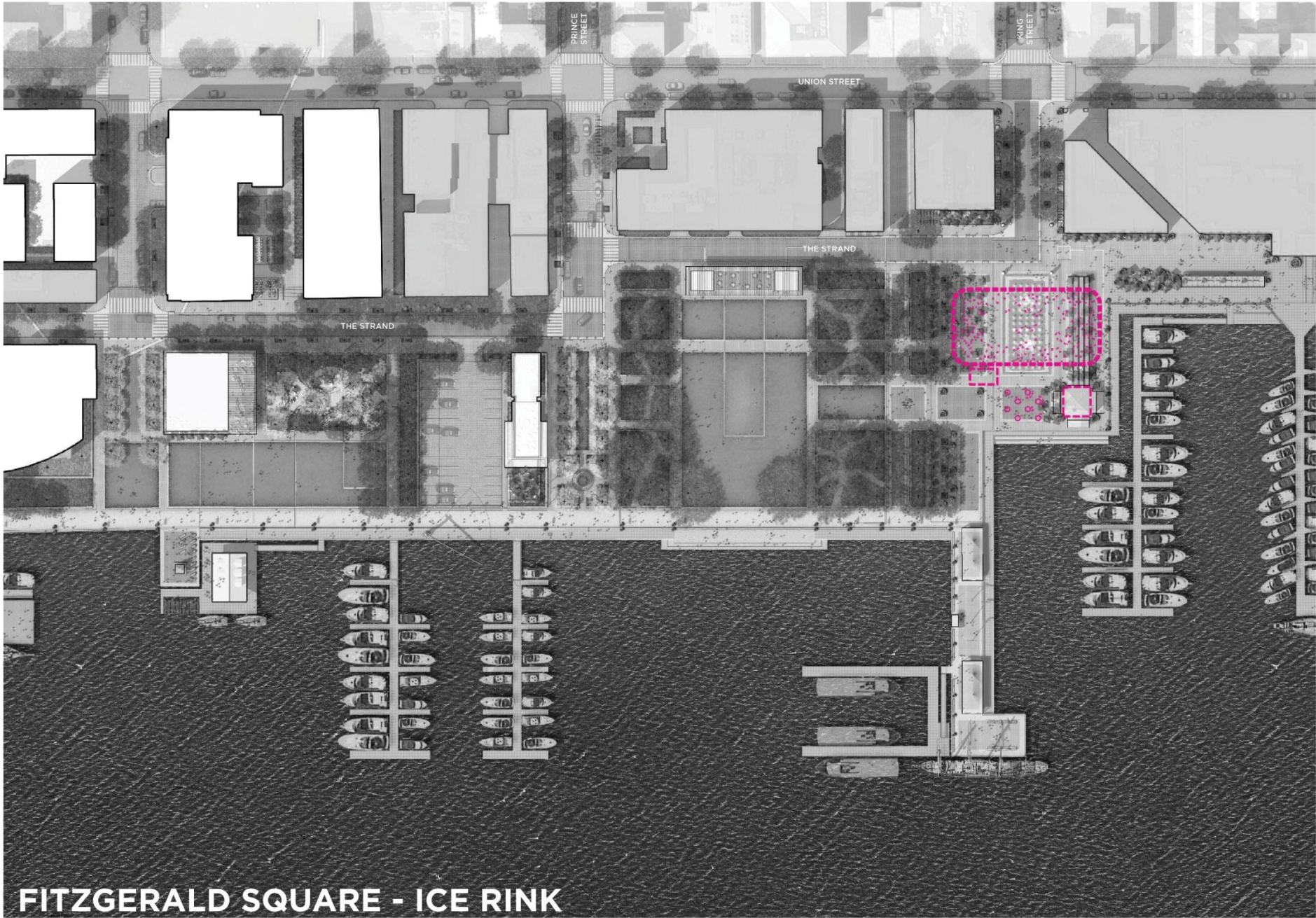
**WATERFRONT PARK - FESTIVAL**





**FITZGERALD SQUARE - PERFORMANCE (750 PEOPLE STANDING)**





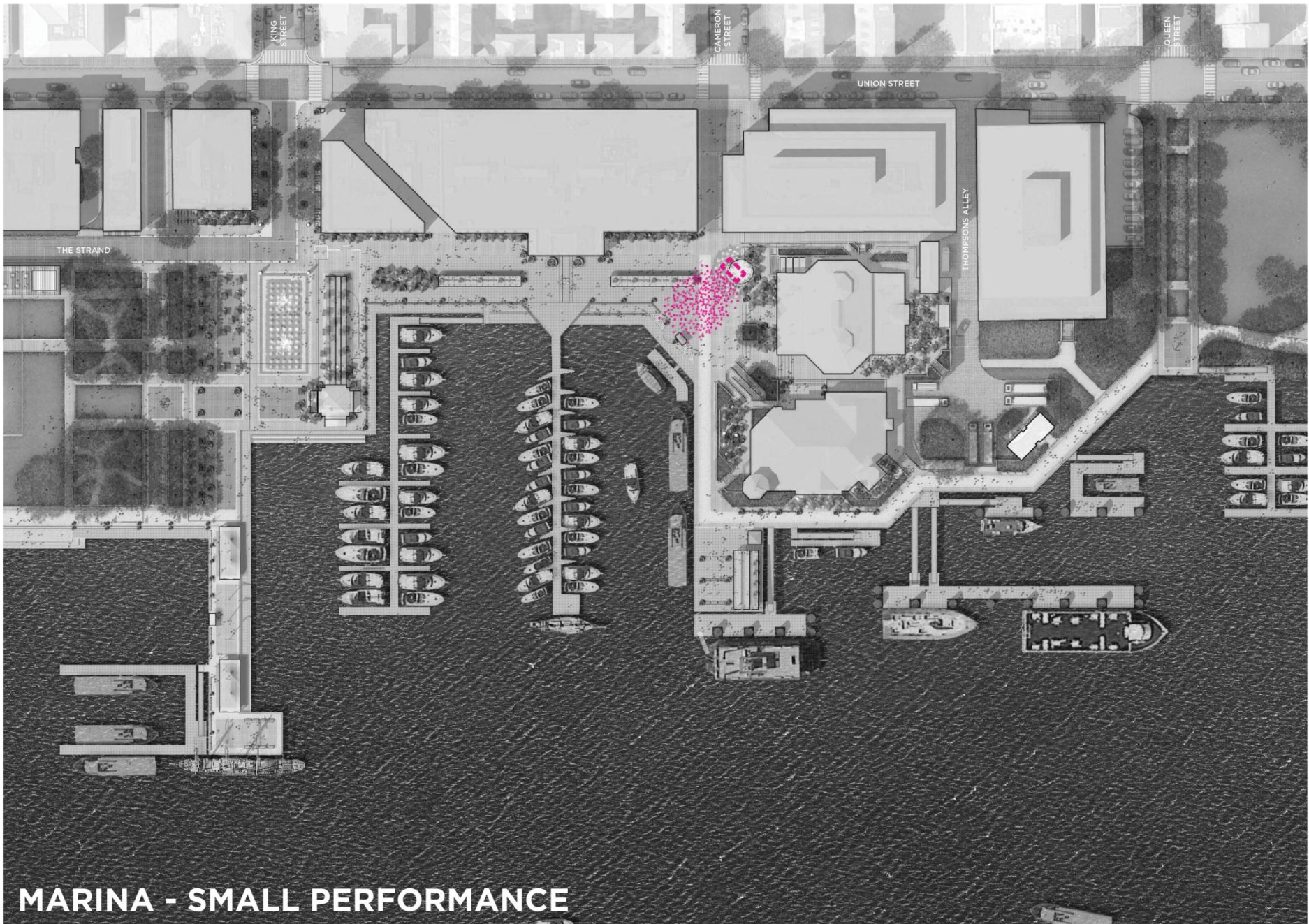
FITZGERALD SQUARE - ICE RINK





FITZGERALD SQUARE - FESTIVAL





MARINA - SMALL PERFORMANCE





**POINT LUMLEY PARK - EXISTING**

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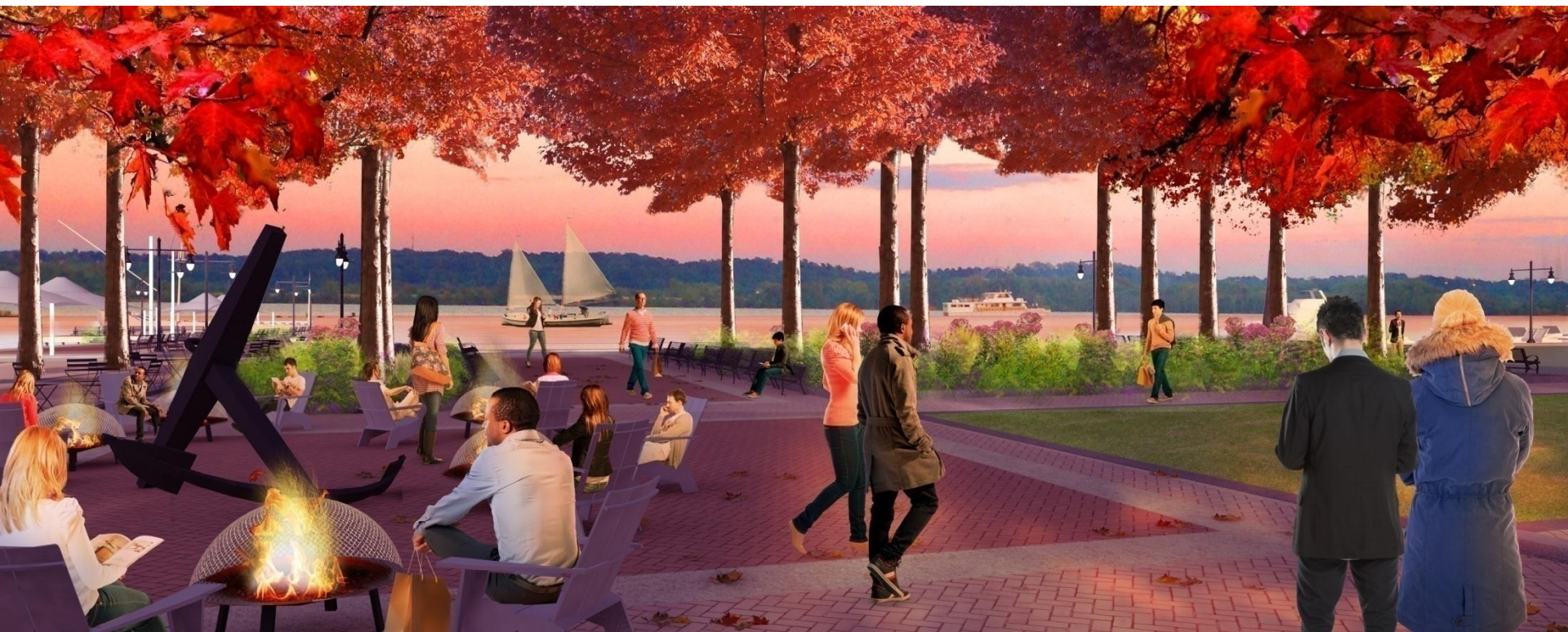
**PRINCE STREET END - EXISTING**

**OLIN**









**VIEW FROM WALES ALLEY TO RIVER**

**OLIN**





**FOOT OF KING STREET LOOKING NORTH - EXISTING**





**FOOT OF KING STREET LOOKING NORTH**





**FOOT OF KING STREET LOOKING NORTH**





**FOOT OF KING STREET LOOKING NORTH**





**FITZGERALD SQUARE - EXISTING**





**FITZGERALD SQUARE – INTERACTIVE WATER FEATURE**

**OLIN**





**FITZGERALD SQUARE – INTERACTIVE WATER FEATURE**

**OLIN**





**FITZGERALD SQUARE WATER FEATURE - TERMINUS**

**OLIN**





**FITZGERALD SQUARE WATER FEATURE - REFLECTIVE**

**OLIN**





**FITZGERALD SQUARE – DURING EVENTS**





**FITZGERALD SQUARE – DURING EVENTS**





**FITZGERALD SQUARE – WINTER**

**OLIN**









**VIEW SOUTH FROM OVERLOOK**

**OLIN**









**FLOOD MITIGATION**

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**OLIN**

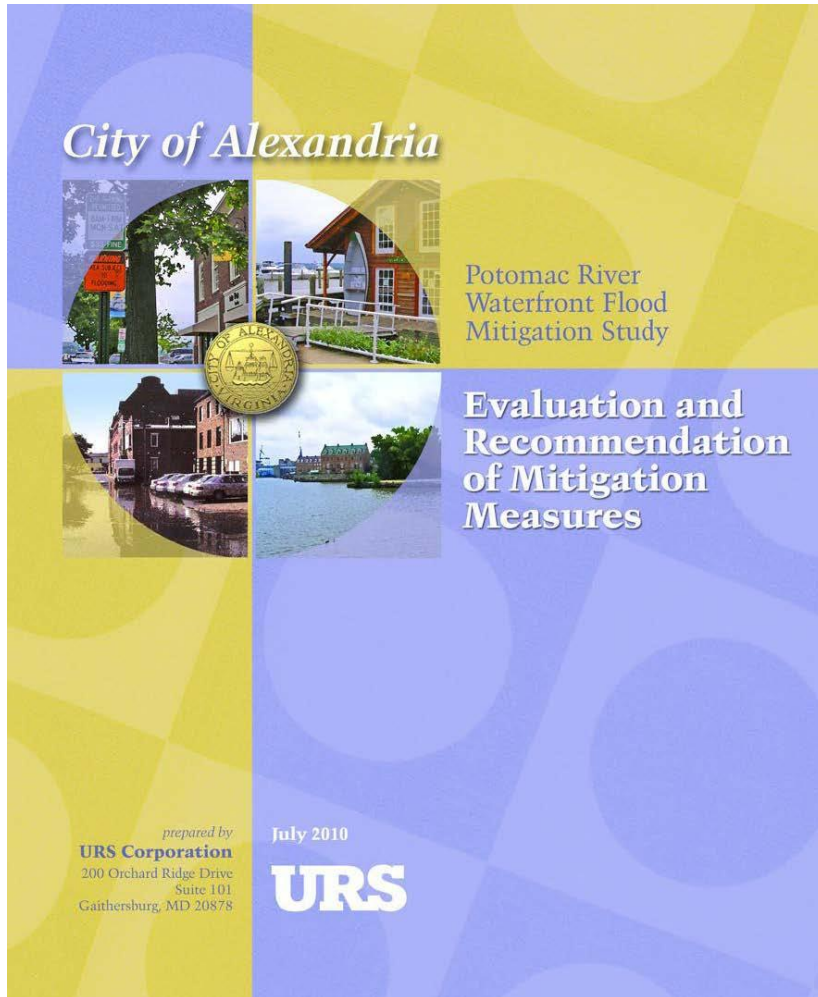


# Flood Mitigation

15% Design – Core Area



# Flood Mitigation Study

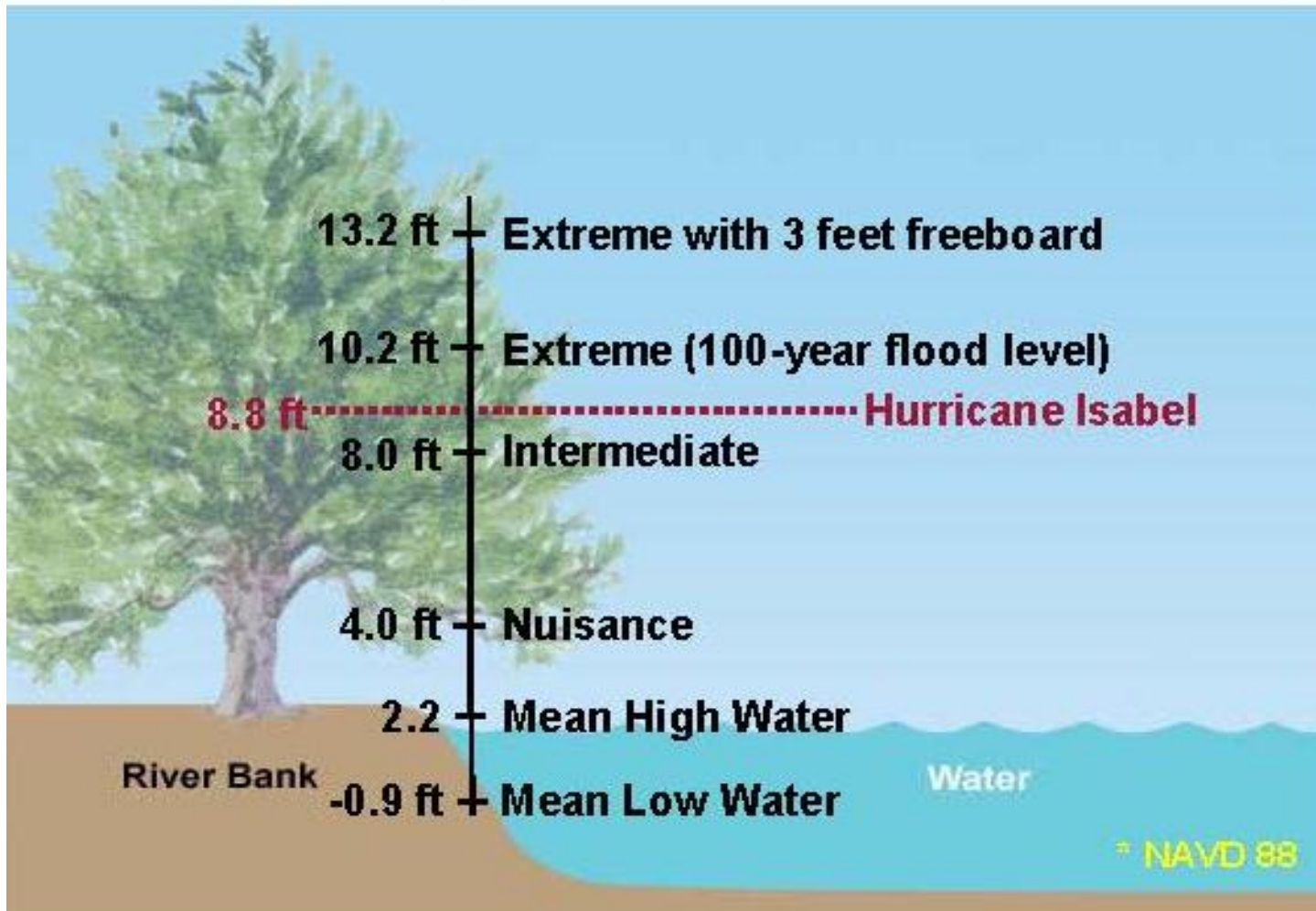


- July 2010
- Comprehensive evaluation of flood levels and mitigation
- Protect to Elevation 6.0'
- Elevated walkway concept
- Balances flood mitigation, cost and maintaining views



# Flood Levels

Figure 2-2: Flood Levels Studied





# EXISTING CONDITIONS-NUISANCE FLOODING AT RIVER ELEVATION = 2.0 FT





# EXISTING CONDITIONS-NUISANCE FLOODING AT RIVER ELEVATION = 3.0 FT





# EXISTING CONDITIONS-NUISANCE FLOODING AT RIVER ELEVATION = 4.0 FT





# EXISTING CONDITIONS-NUISANCE FLOODING AT RIVER ELEVATION = 5.0 FT





# EXISTING CONDITIONS-NUISANCE FLOODING AT RIVER ELEVATION — 6.0 FT





# Recent Flooding



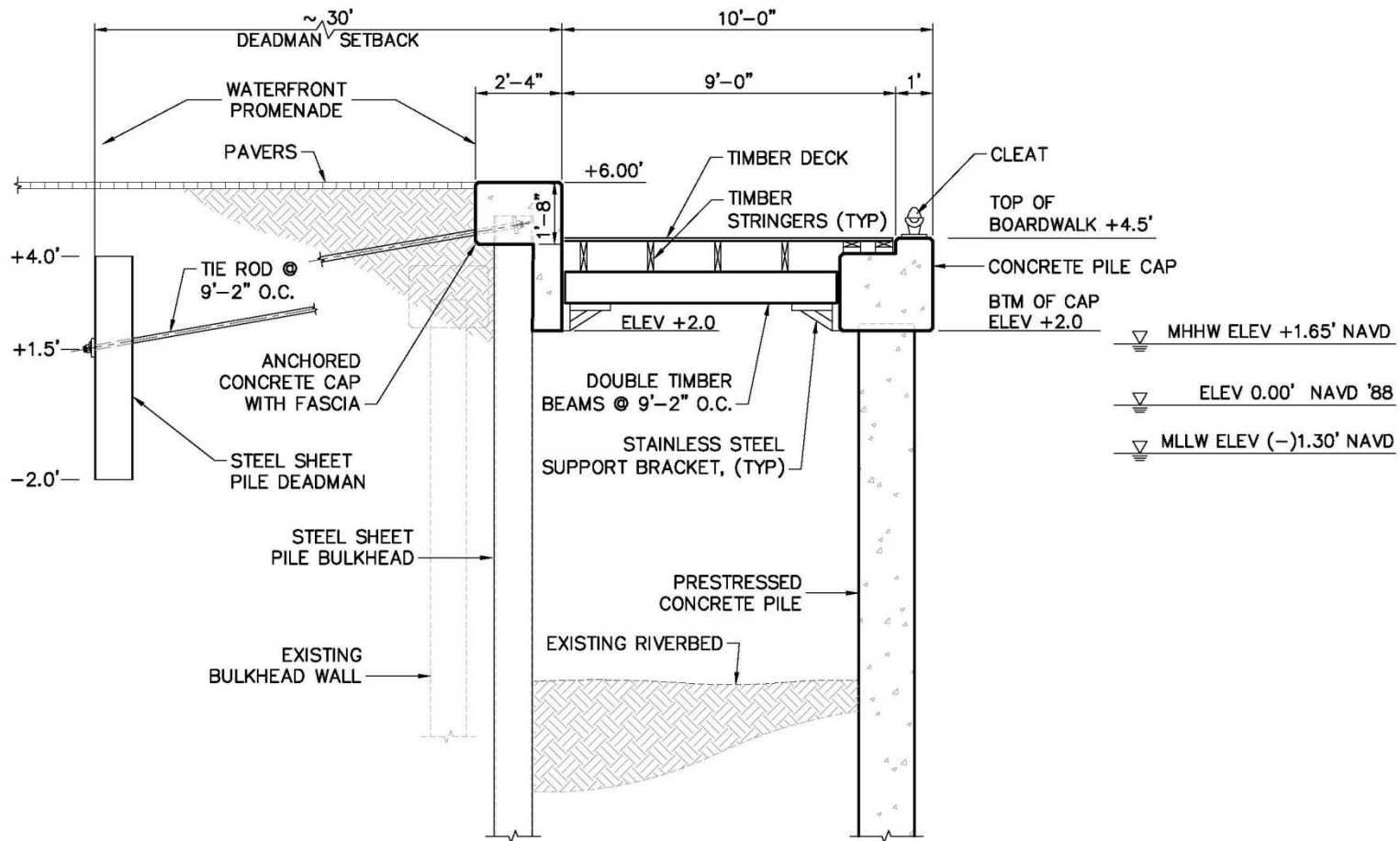


# Flood Mitigation

- URS Corporation
- Build upon 2010 study
- Incorporate into Olin Landscape Design
- 15% Design for the core area
- Drainage and infrastructure analyses
- 3 main components
  - Raised bulkhead
  - Pump stations (2)
  - Separated storm sewer system



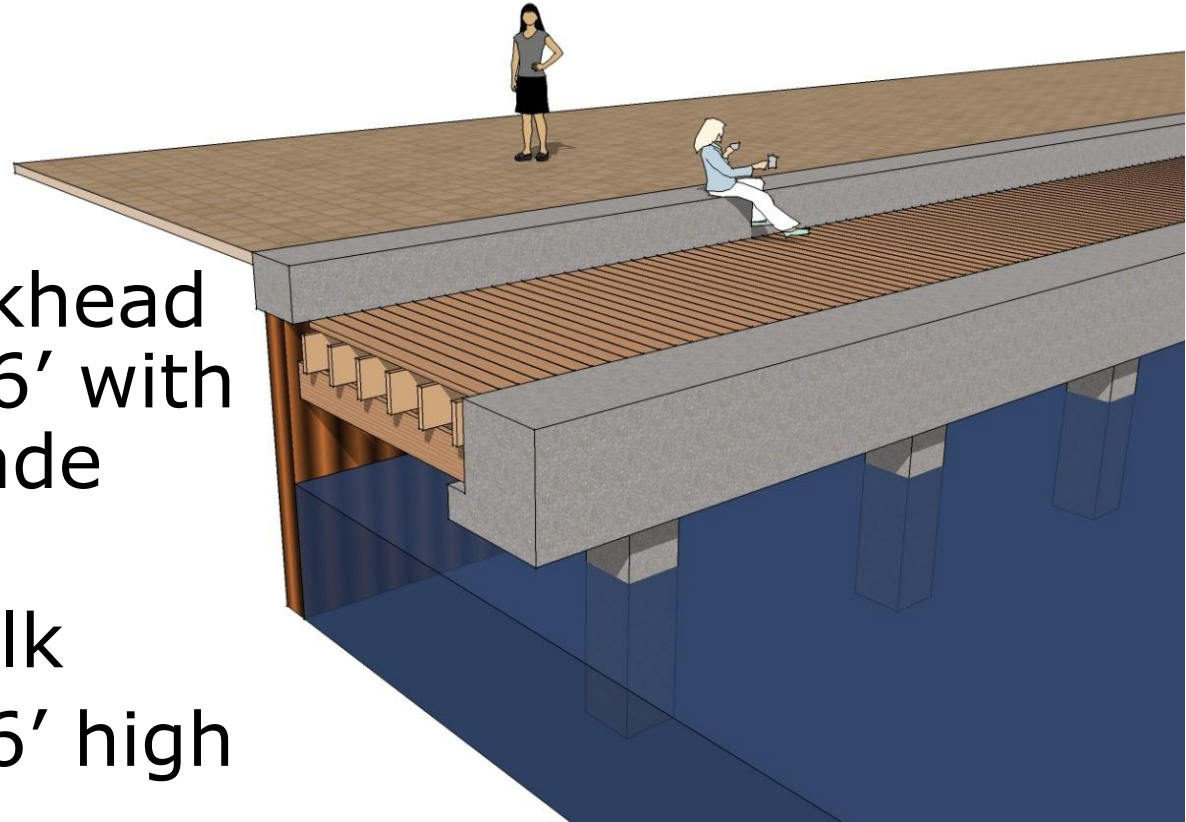
# Bulkhead Detail





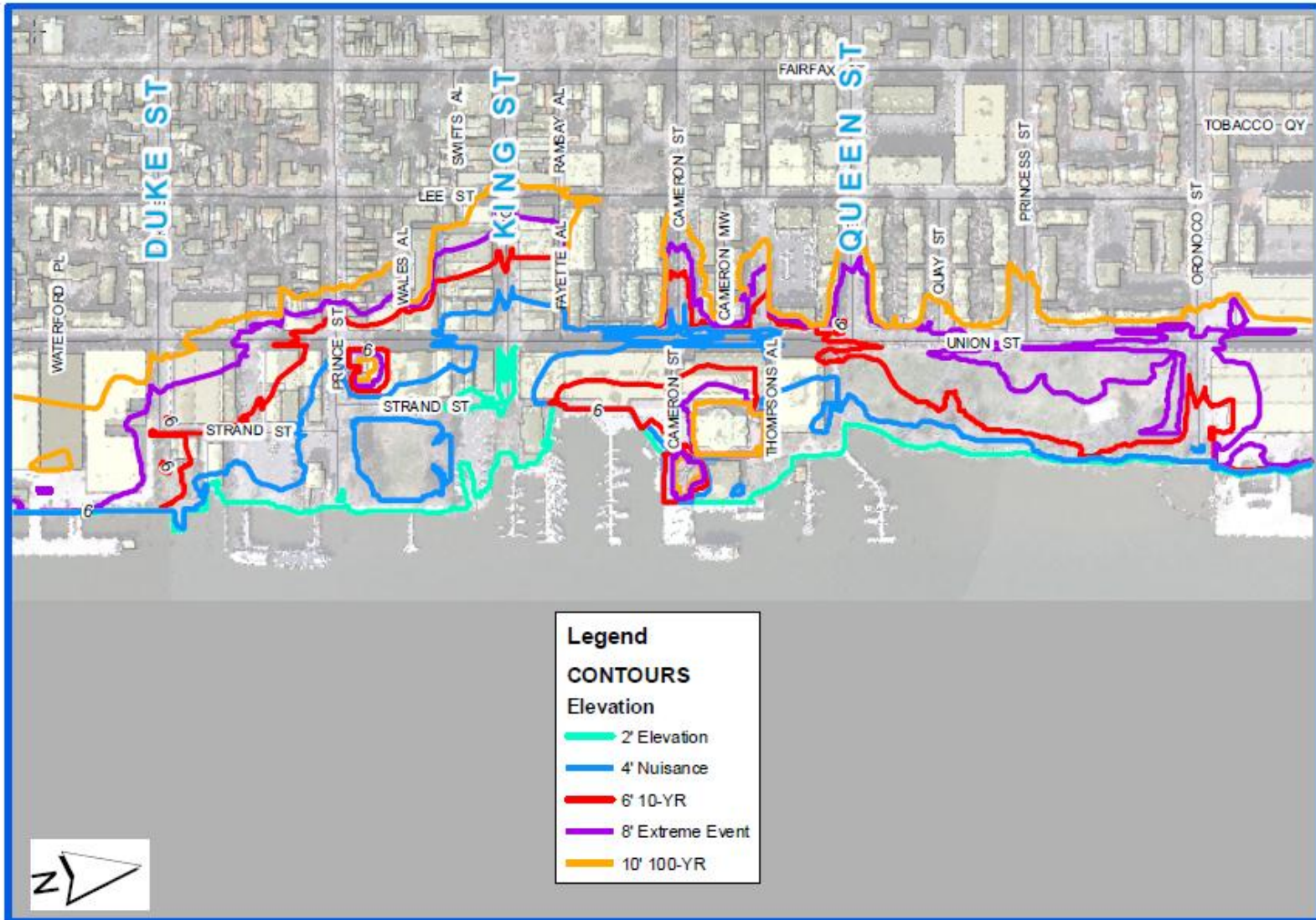
# Bulkhead/Promenade

- New bulkhead to Elev. 6' with promenade
- Lower boardwalk
- Is Elev. 6' high enough?





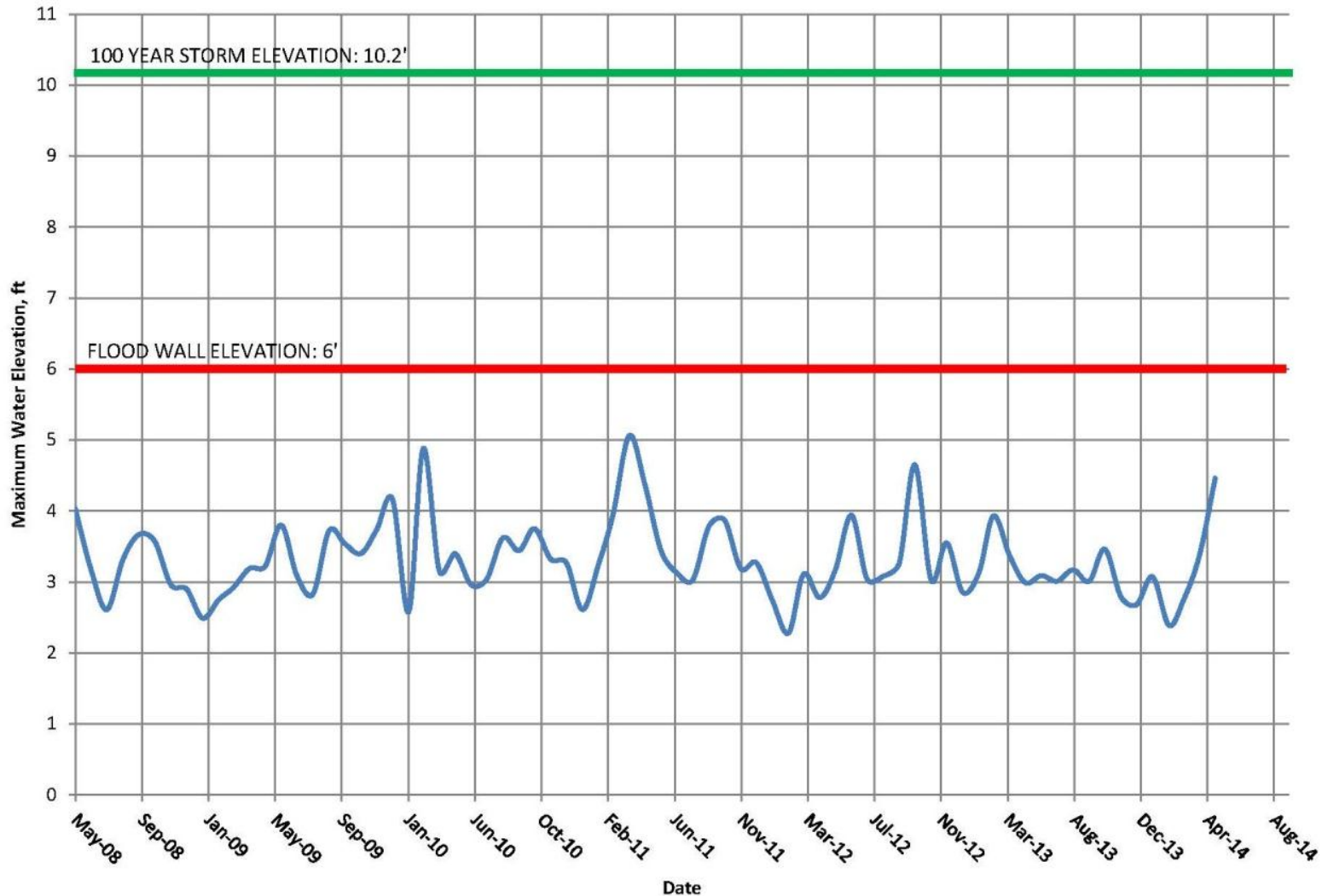
# Flood Extents





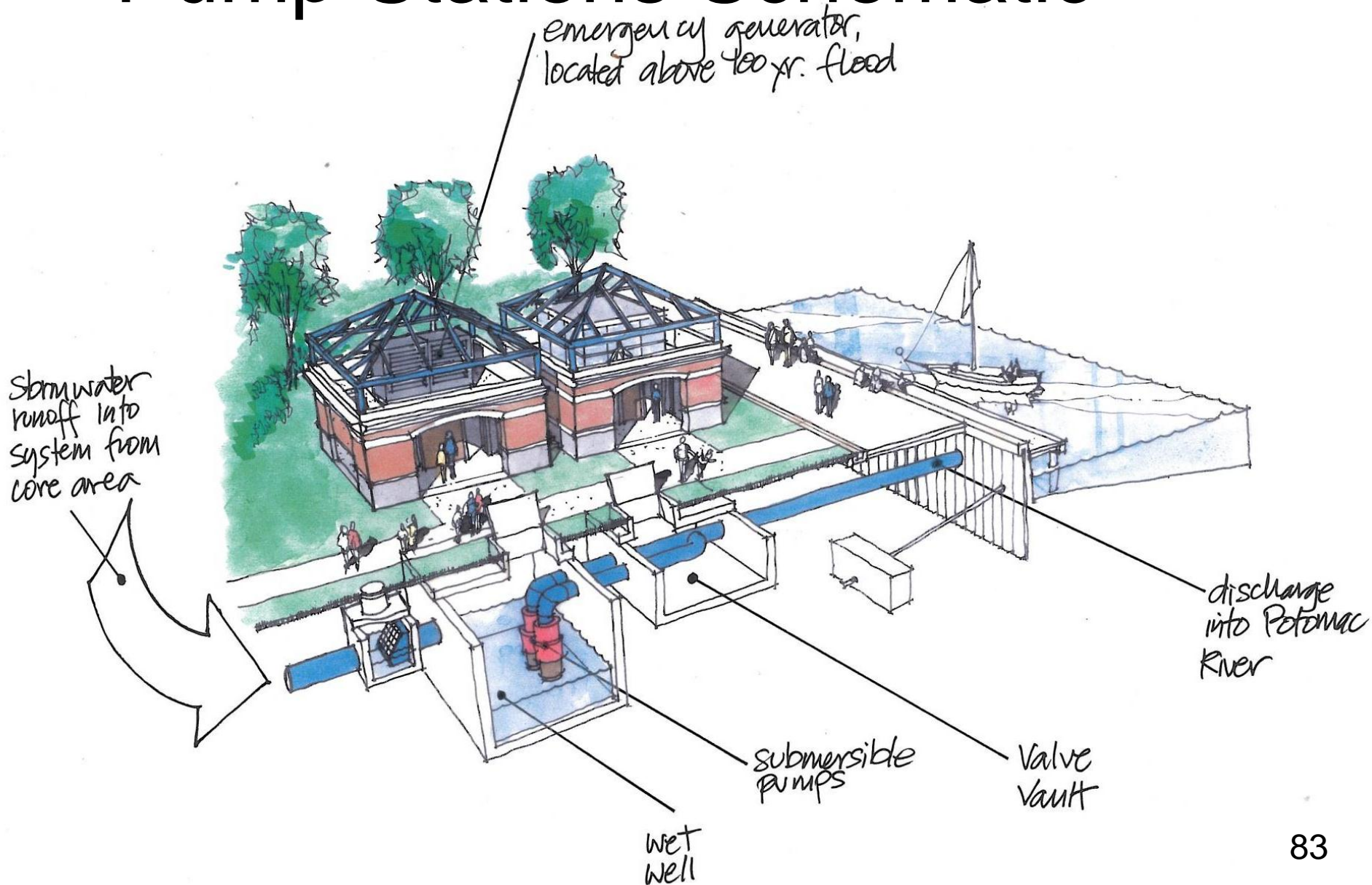
# USGS Tide Gage

## Maximum Monthly Water Surface Elevations





# Pump Stations Schematic



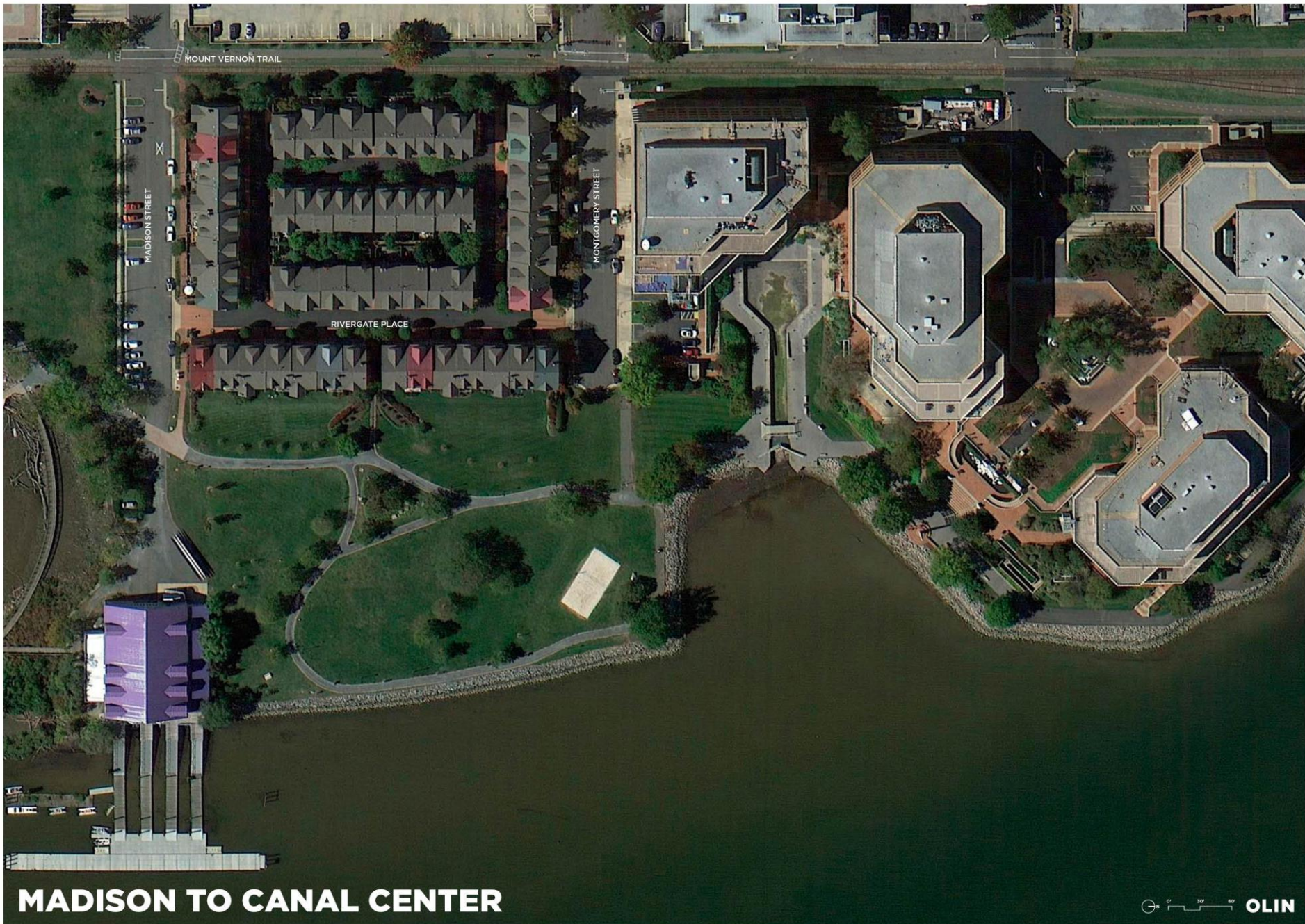


An aerial photograph of a large, diverse crowd of people gathered on a vast, green lawn. The people are scattered across the entire frame, some sitting on blankets, others standing in small groups, and many walking. The perspective is from directly above, looking down on the scene. The text "CONCEPT DESIGNS OUTSIDE CORE AREA" is overlaid in the center of the image, with a thin horizontal line extending from the left edge to the end of the text.

**CONCEPT DESIGNS OUTSIDE CORE AREA**

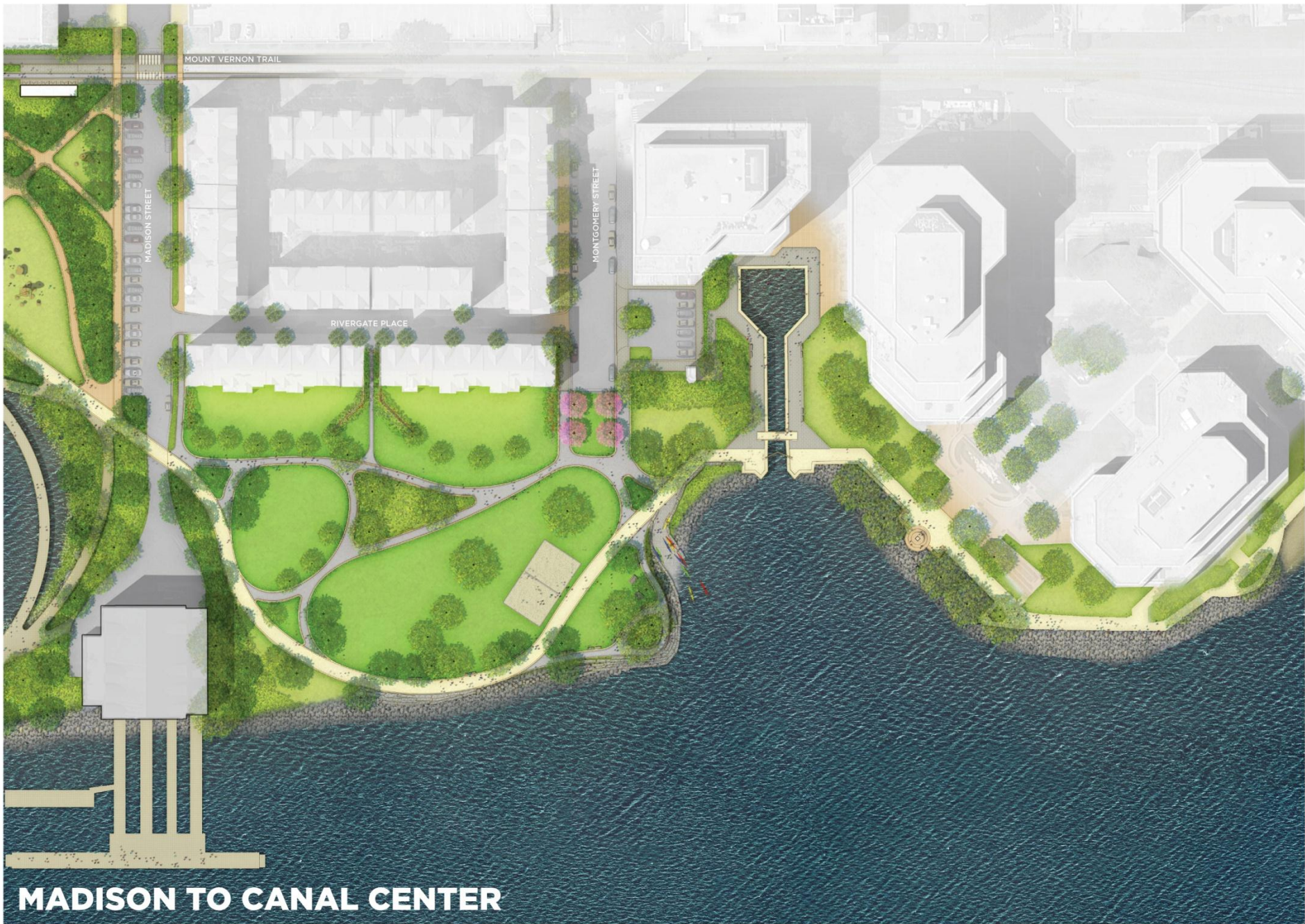
**OLIN**





**MADISON TO CANAL CENTER**





**MADISON TO CANAL CENTER**









**RIVERGATE PARK - EXISTING**





**RIVERGATE PARK - PROPOSED**





**ORONOCO TO MADISON**

**OLIN**













**ORONOCO BAY PARK - EXISTING**





**ORONOCO BAY PARK - PROPOSED**





**ORONOCO BAY PARK - EXISTING**





**ORONOCO BAY PARK - PROPOSED**





**RALPH'S GUT - EXISTING**





**RALPH'S GUT - PROPOSED**





# QUEEN TO ORONOCO





QUEEN TO ORONOCO









**FOUNDERS PARK - EXISTING**





**FOUNDERS PARK - PROPOSED**





**SUSTAINABILITY**

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**OLIN**





# SUSTAINABILITY AND ECOLOGICAL SYSTEMS



	SOCIAL <ul style="list-style-type: none"> <li>•Quality of the space</li> <li>•Opportunities for interaction</li> <li>•Financial</li> </ul>	MATERIALS <ul style="list-style-type: none"> <li>•Durability / Maintenance</li> <li>•Local</li> <li>•Responsible production</li> </ul>	HABITAT ENHANCEMENT THROUGH PLANTING <ul style="list-style-type: none"> <li>•Native / Adaptive</li> <li>•Biodiversity</li> <li>•Low maintenance</li> </ul>	ENERGY <ul style="list-style-type: none"> <li>•Renewable Solar</li> <li>•Urban heat island mitigation</li> <li>•Efficient Lighting</li> </ul>	WATER <ul style="list-style-type: none"> <li>•Quality</li> <li>•Stormwater Management</li> <li>•Potential for Reuse</li> </ul>
WILKES - DUKE					
DUKE - KING					
KING - QUEEN					
QUEEN - ORONOCO					
PENDLETON - MADISON					
MADISON - MONTGOMERY					







WATER RECEIVING  
TREE PITS

**WASHINGTON CANAL PARK: WASHINGTON, DC**





Storm Water Treatment Landscape  
w/Underground Storage





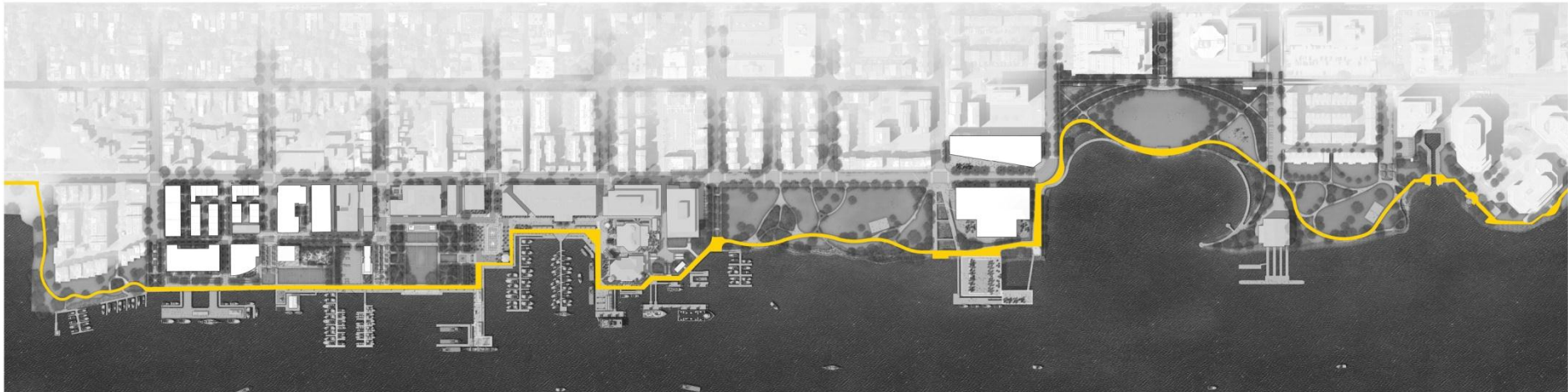


**COMMON ELEMENTS**

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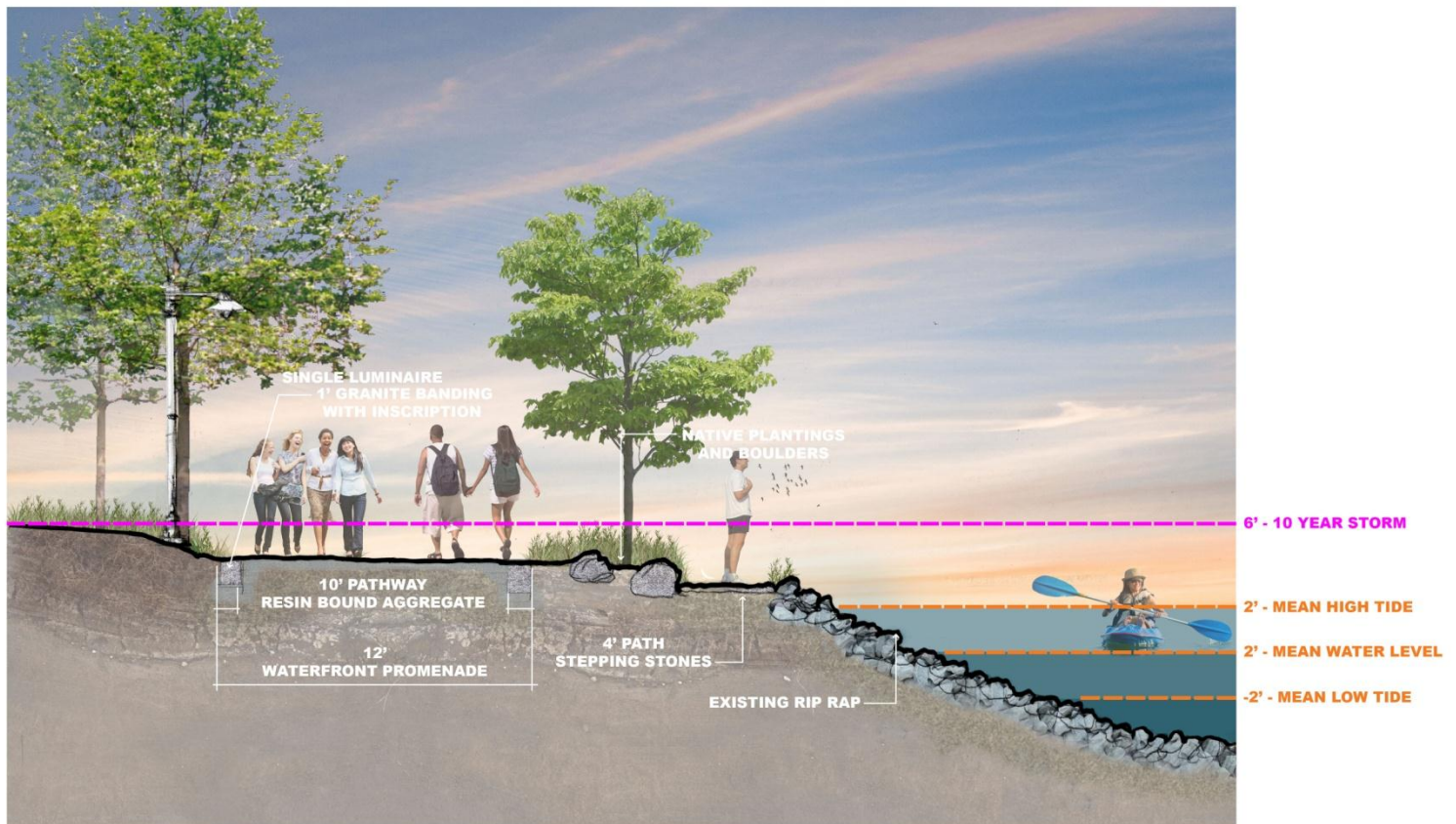
**OLIN**





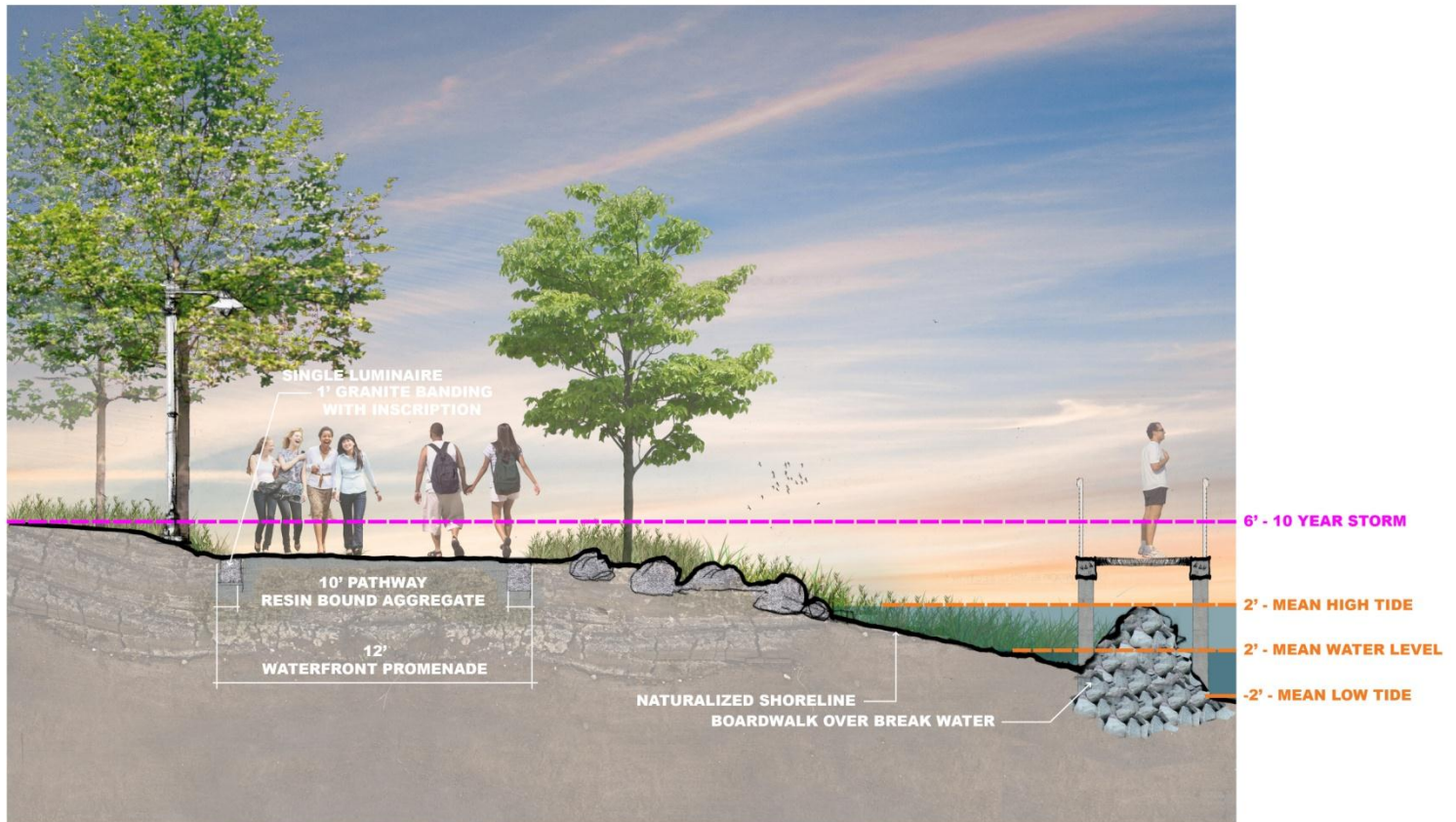
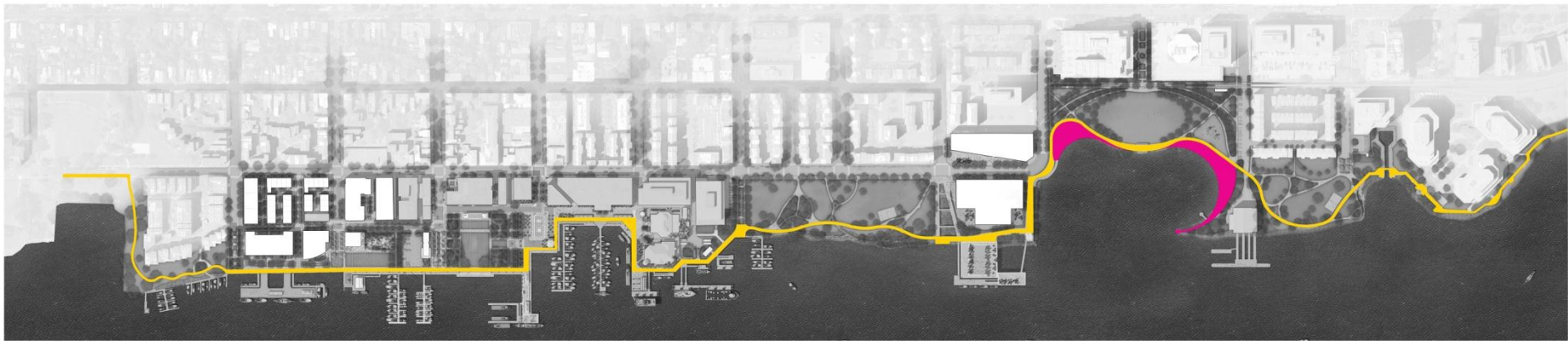
**CONTINUOUS WATERFRONT PATH**





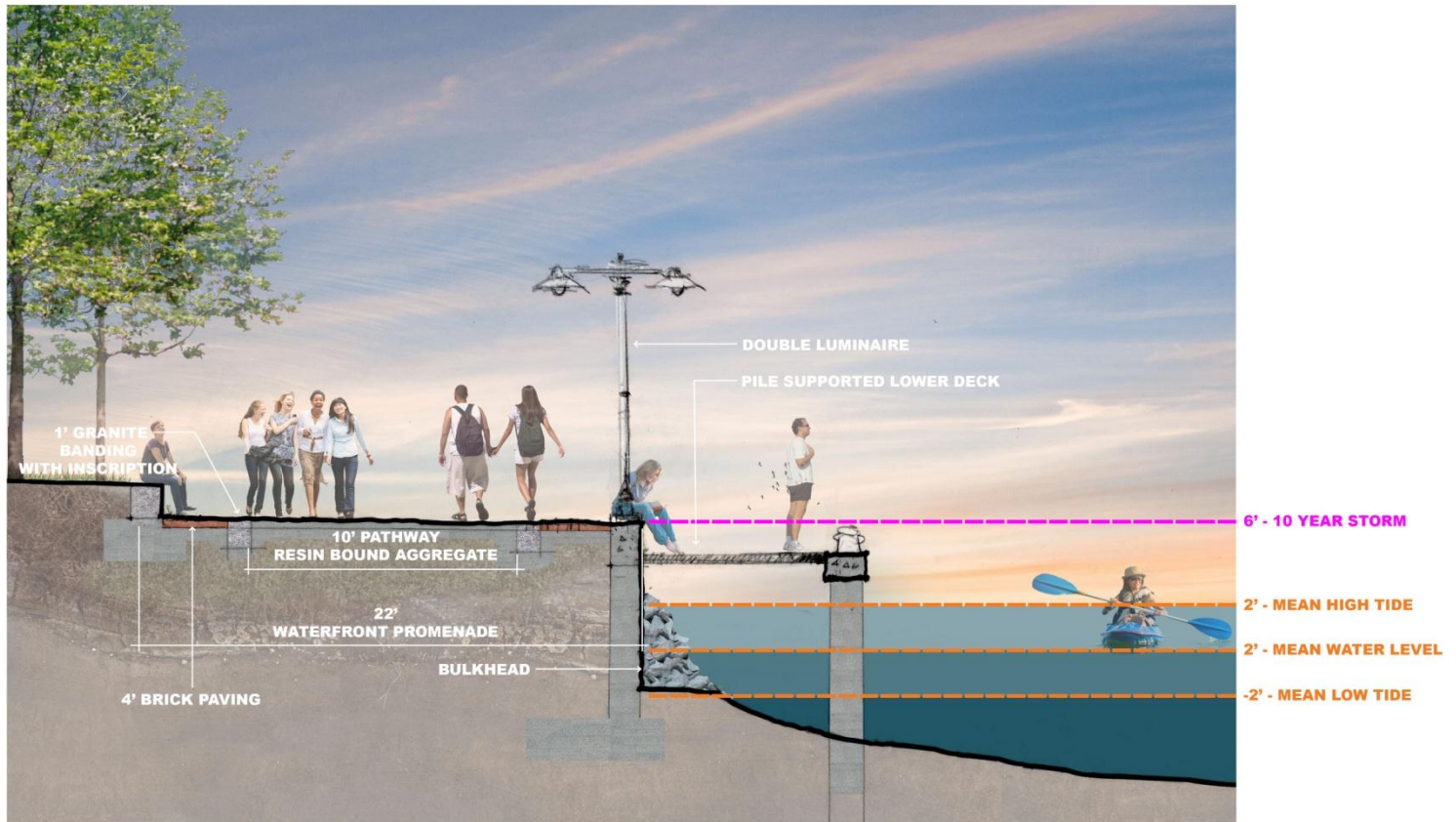
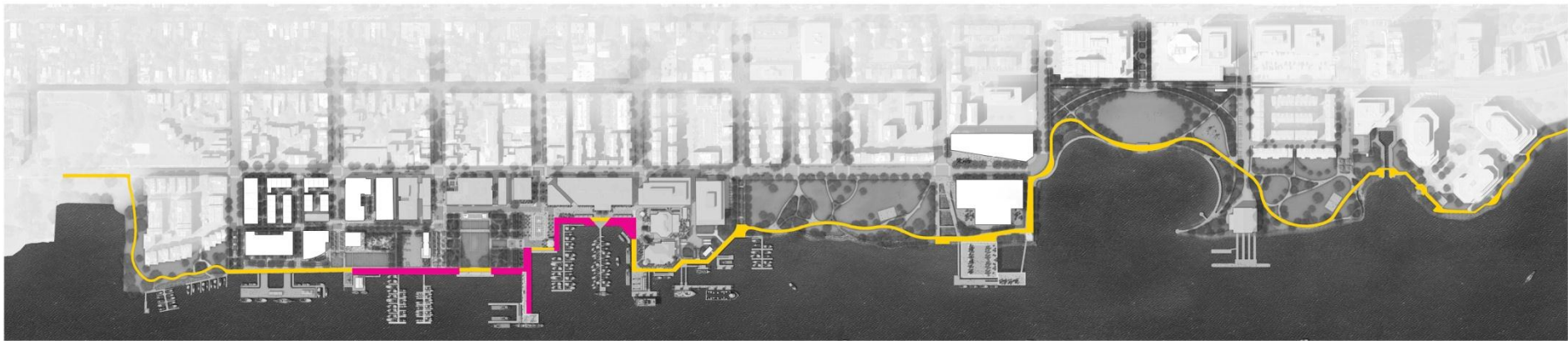
**CONTINUOUS PATH WITH STEPPING STONE PATH ABOVE RIPRAP**





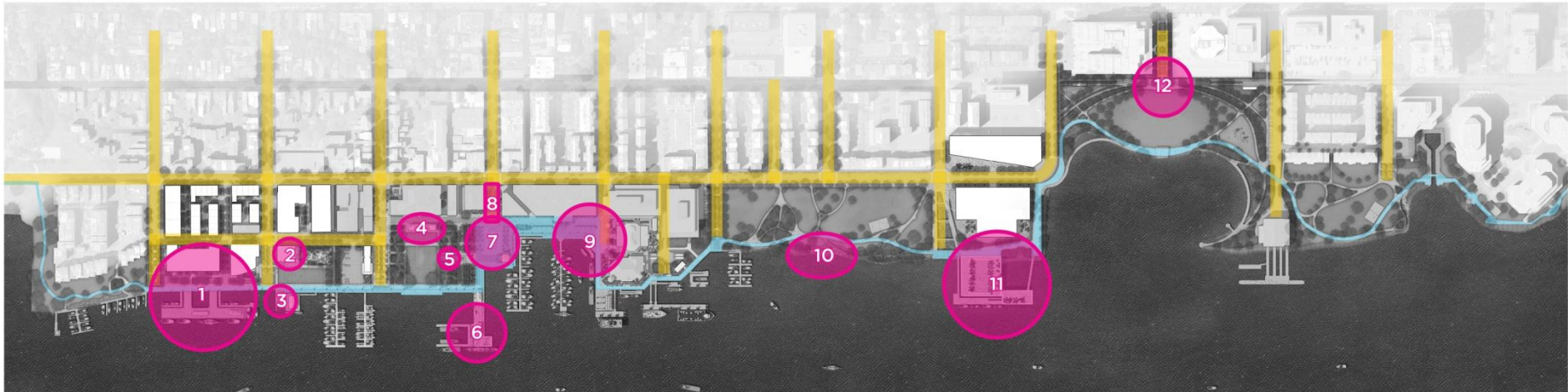
## CONTINUOUS PATH WITH BOARDWALK OVER BREAKWATER





## PROMENADE WITH LOWER DECKING

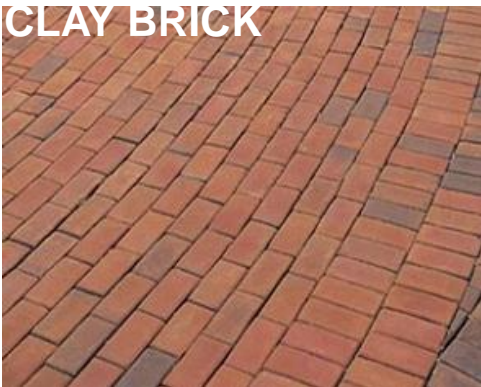




- |                          |                               |
|--------------------------|-------------------------------|
| 1 RTS PIER               | 9 CITY MARINA / TORPEDO PLAZA |
| 2 CIVIC BUILDING PLAZA   | 10 BOULDER STEPPING STONES    |
| 3 POINT LUMLEY PIER      | 11 RTN PIER                   |
| 4 WATERFRONT PARK PLAZA  | 12 WYTHE STREET PLAZA         |
| 5 TRANSITIONAL PLAZA     |                               |
| 6 KING STREET PIER       |                               |
| 7 FITZGERALD SQUARE      |                               |
| 8 KING STREET UNIT BLOCK |                               |



CLAY BRICK



STONE DUST



STONE COBBLES



GRANITE PAVING



EXPOSED AGGREGATE CONCRETE



STEPPING STONES IN STONE FINES



BOARDWALK



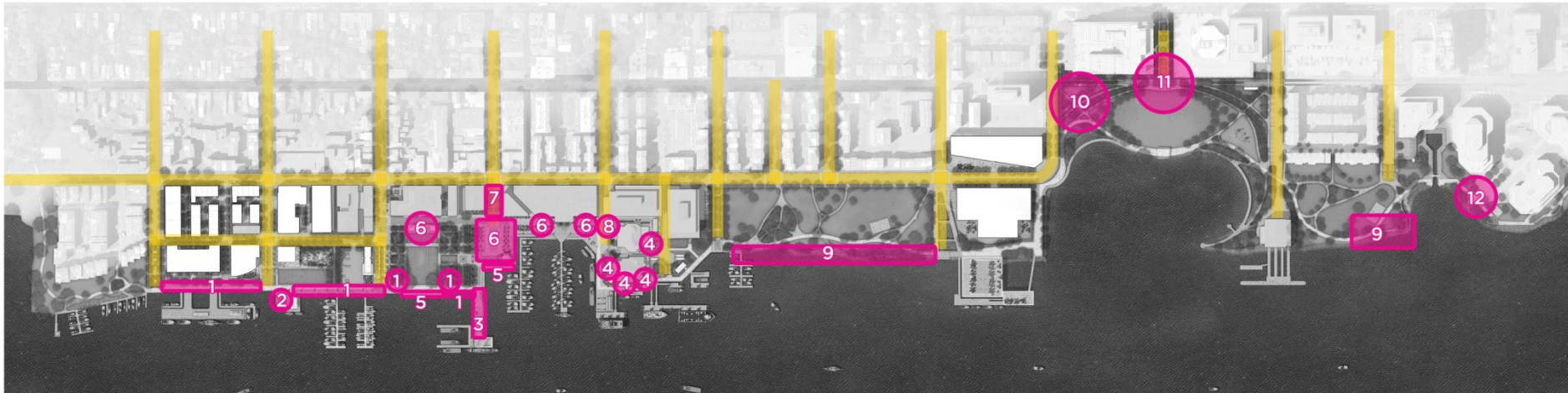
RESIN BONDED AGREGATE



GRANITE CURB



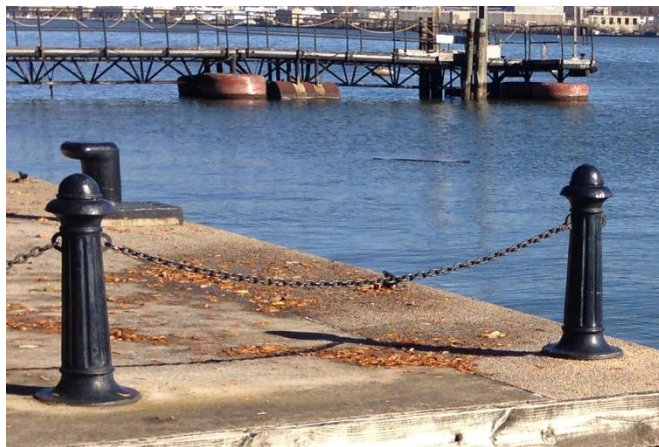




- |                               |                             |
|-------------------------------|-----------------------------|
| 1 GRANITE SEAT WALL           | 9 BOULDER STEPS             |
| 2 LOUNGE CHAIRS               | 10 PICNIC TABLES            |
| 3 GLIDER SEATING              | 11 ADIRONDACK LOUNGE CHAIRS |
| 4 ROOFTOP OUTDOOR DINING      | 12 PROMENADE CLASSIQUE      |
| 5 WATERFRONT STEPS            |                             |
| 6 FLEXIBLE SEATING            |                             |
| 7 MOUNTING BLOCKS             |                             |
| 8 STEPPED SEATING AT FOUNTAIN |                             |

## COMMON ELEMENTS - FURNISHINGS

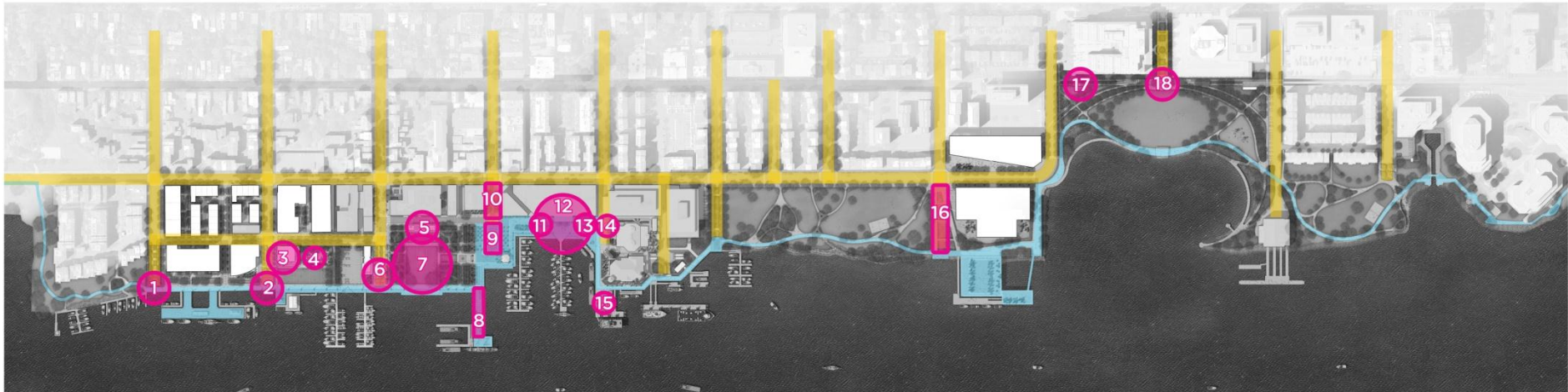




**FURNISHINGS**

**OLIN**





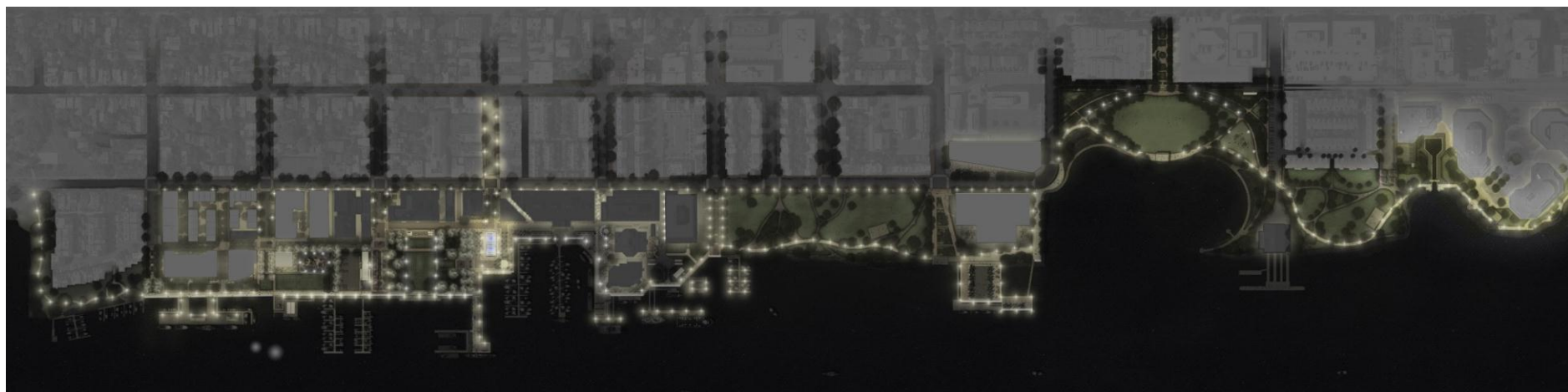
- 1 WOLFE STREET END CATENARY LIGHTING
- 2 DUKE STREET END CATENARY LIGHTING
- 3 CIVIC BUILDING LIGHTING
- 4 PLAY AREA WHIMSICAL BOLLARD LIGHTS
- 5 TRELLIS UPLIGHTING
- 6 PRINCE STREET END CATENARY LIGHTING
- 7 WATERFRONT PARK MOONLIGHTING
- 8 SHADE STRUCTURE LIGHTING

- 9 FOUNTAIN LIGHTING
- 10 TREE LIGHTING
- 11 SHADE STRUCTURE LIGHTING
- 12 TORPEDO FACTORY LIGHTING
- 13 SHADE STRUCTURE LIGHTING
- 14 GAZEBO FOUNTAIN LIGHTING
- 15 SHADE STRUCTURE LIGHTING
- 16 ORONOCO STREET END CATENARY LIGHTING

- 17 BOX CAR THEATER
- 18 WYTHE STREET PLAZA LIGHTING

# LIGHTING – WATERFRONT ROOMS





**WATERFRONT LIGHTING CONCEPT**

**OLIN**





**LIGHTING**

**OLIN**



